BY ORDER OF THE COMMANDER CREECH AFB

CREECH AIR FORCE BASE INSTRUCTION 15- 129

28 MARCH 2016

Weather

WEATHER SUPPORT

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This instruction establishes the responsibilities and procedures for providing and using weather services at Creech Air Force Base (AFB) and applies to all agencies described herein. It also implements and incorporates the requirements of Air Force Office of Safety and Health (AFOSH) Standard 91-501, *Adverse Weather*; Air Force Instruction (AFI) 15-128, *Air Force Weather Roles and Responsibilities*; Air Force Manual (AFMAN) 15-129, Volume 1, *Air and Space Weather Operations – Characterization*; AFMAN 15-129, Volume 2, *Air and Space Weather Operations – Exploitation*; and AFMAN 15-129, Volume 2, ACC_SUP, *Air and Space Weather Operations – Exploitation.* It provides general information on weather services including weather observations and forecasts, weather warnings and advisories, dissemination of weather information, and reciprocal support. Send comments and suggested improvements to this instruction on AF Form 847, Recommendation for Change of Publication, through channels to 432 OSS/OSW, Building 91, Third Street, Creech Air Force Base, NV 89018. Ensure that all records created as a result of processes prescribed in this publication are maintained in accordance with AFMAN 33-363, *Management of Records*, and disposed of in accordance with Air Force Records Information Management System (AFRIMS) Records Disposition Schedule (RDS) located at **https://www.my.af.mil/gcss-af61a/afrims/afrims/**.

SUMMARY OF CHANGES

This document has been substantially revised and must be completely reviewed. Major changes include: **Chapter 1:** In **paragraph 1.1.2,** added "Support requirements between the 25 OWS and 432 OSS/OSW are outlined in the installation data page, and are available on the 25 OWS webpage." was added to satisfy AF Weather requirements. **Paragraph 1.3** has been deleted as it

contained only redundant and irrelevant information. **Paragraph 1.9** was updated with new AOL information after the previous AOL location changed.

Chapter 2: In **paragraph 2.1**, ceiling and visibility requirements for Basic Weather Watch was changed from 1,500 feet/3 miles to 5,000 feet/5 miles. In **paragraph 2.2** 5,000 foot ceilings and 5 miles visibility were added to supplement criteria. These criteria will only be supplemented during operational hours.

Chapter 3: Paragraph 3.1.1 was changed to read, "Weather technicians at the 25 OWS will prepare and disseminate a Creech AFB TAF through JET at 0900Z, 1700Z, and 0100Z and cover a 30-hour period." **Paragraph 3.2.1** was changed to read, "The MWP will be produced by the 432 OSS/OSW. Several MWPs will be issued per day with amendments issued when necessary. The first MWP of the day will be posted to the 432 OSS/OSW webpage no later than 3 hours prior to the first launch.

Chapter 4: Paragraph 4.1 was changed to remove WAR briefing date specifics as well as the requirement to cover Las Vegas weather during the Wg Staff meeting. **Paragraph 4.2** was changed to read, "The 432 OSS/OSW, when requested, will provide weather briefings to the Creech AFB Command Support Staff and CRT as necessary. The format of the briefing will be tailored to the scenario driving the Command Support Staff's request."**Paragraph 4.6**, Pre-deployment Planning was added to incorporate AF Weather requirements.

Chapter 5: Added **Table 5.1** Desired Lead-Time vs. Verification Range. Changed **Table 5.2** to Creech AFB Forecast Weather Watch Criteria. The Severe Thunderstorm watch criteria were amended to include ¼ inch hail. Heavy rain watch criteria were changed to 2 inches in 4 hours. Changed **Table 5.3** to Creech AFB Forecast Weather Warning Criteria. The Severe Thunderstorm warning criteria were amended to include ¼ inch hail. Heavy rain warning criteria were changed to 2 inches in 4 hours. Changed **Table 5.4** to Creech AFB Observed Weather Warning Criteria. Added **Table 5.5** Creech AFB Observed Weather Advisory Criteria. Lightning advisory distance was changed from 20 nautical miles to 25 nautical miles.Added **Table 5.6** Conditions Requiring Notification/Activation of SWAT Standby Member. Hail criteria were changed to ¼ inch to match all watch and warning criteria.

Chapter 6:A requirement was added in **paragraph 6.4** for operations personnel to notify 432 OSS/OSW forecasters of any scheduled flights outside the NTTR at least 24 hours in advance to allow proper coordination of flight weather briefing support. **Paragraph 6.14** was changed to read, "99 AMDS/SGPB is the OPR for all Bioenvironmental Engineering issues for Creech AFB. Once exception applies to measurement of the Wet Bulb Globe Temperature (WBGT). This measurement is typically a function of Bioenvironmental Engineering which is not present at Creech AFB. Due to the distance, altitude, and environment change between Creech AFB and Nellis AFB, a measure of WBGT taken at Nellis AFB is not accurate enough to support the mission requirements of Creech AFB. Therefore, the 432 OSS/OSW will provide the WBGT measurement of Creech AFB utilizing the exact same equipment as Nellis AGB and communicate the corresponding flag conditions through the ADHOC service."

Attachment 2: In **paragraph A2.1** 4 and 5 miles prevailing visibility were added to the special observation criteria. In **paragraph A2.2** 4,000, 3,000, and 500 foot ceilings were added to the special observation criteria.

Attachment 4: In **paragraph A4.2** 4,000 foot ceilings and 4 miles visibility were added to TAF specification and amendment criteria.

Attachment 7: The Moderate Thunderstorm Warning was deleted to match the updated WWA criteria.

Attachment 8: The Moderate Thunderstorm Warning was deleted to match the updated WWA criteria. The Blizzard Warning was deleted to match the WWA criteria.

Chapter 1

GENERAL INFORMATION

1.1. General.

1.1.1. The 432d Operations Support Squadron Weather Flight (432 OSS/OSW) consists of multiple elements. The Creech Weather Operations Element provides all weather services and support for Creech AFB, and its responsibilities and procedures are defined in this instruction. The other elements of the 432 OSS/OSW provide weather services for downrange combat operations. The responsibilities and procedures for those elements are documented in applicable plans/regulations or Letters of Agreement, as required, and are not included in this document.

1.1.2. The 25th Operational Weather Squadron (OWS) at Davis-Monthan AFB, AZ and 432 OSS/OSW are the official weather information agencies for and provide weather services to the 432d Wing (432 WG) and other units assigned to Creech AFB, NV. Basic concepts and procedures are outlined in Air Force and Air Combat Command directives. Support requirements between the 25 OWS and 432 OSS/OSW are outlined in the installation data page, and are available on the 25 OWS webpage.

1.1.3. This document establishes requirements and procedures for weather support, which must be coordinated at the local level to meet mission needs. It consolidates weather support requirements and procedures for peacetime operations and eliminates the need for written agreements between the weather unit and supported operations. It does not cover weather support procedures for emergency war operations or certain other special operations or procedures.

1.2. Designators. All weather products disseminated by or for Creech AFB will use KINS as the ICAO location indicator. The World Meteorological Organization (WMO) index number is 72387.

1.3. Assumptions. Adequate resources and communications will be available to execute this instruction and sufficient weather intelligence will be available from various sources on which to base weather operations and production.

1.4. Limiting Factors to Weather Operations. The terrain features surrounding Creech AFB create a unique forecasting challenge. Wind currents blocked, enhanced, or diverted by surrounding hills and mountains can cause varying wind conditions across the airfield. A lack of nearby surface observations only adds to the forecast uncertainty.

1.5. Duty Priorities. All base weather station (BWS) tasks cannot be accomplished simultaneously. Duty priorities are established to ensure tasks are accomplished in order of relative importance and publicized to avoid misunderstanding among supported agencies. Duty priorities will ensure timely response to situations under normal conditions. This list will not replace good judgment. Weather technicians may deviate in the best interest of flight safety and/or protection of personnel or property. Weather technicians will use the following priority list as a guide for accomplishing duties:

Table 1.1. 432 OSS/OSW Duty Priority List.

Order of Priority	Duties
1	Perform EU Emergency War Order (EWO) Taskings
2	Execute EU Evacuation
3	Respond to Aircraft/Ground Emergencies
4	Respond to Pilot to Metro Service (PMSV)/ Phone Contacts
5	Provide Weather Information to Supervisor of Flying (SOF) Operations Supervisors (TOP 3) / Maintenance Operations Center (MOC)
6	SWAP Operations
7	Record and disseminate Surface Weather Observations / Augment AN/FMQ-19 Observations for Mandatory Elements
8	Provide "Eyes Forward" / Collaborate with 25 OWS
9	Provide Mission Weather Products
10	Disseminate Urgent PIREPs
11	Disseminate Routine PIREPs
12	Perform MISSIONWATCH Activities
13	Provide Other Weather Services and Briefings
14	Weather Functional Training
15	Accomplish Administrative Tasks

1.6. Geographic Area of Responsibility. The area of responsibility for products and services provided by the 432 OSS/OSW is the terminal area, which is defined as the area located within a five nautical mile radius around the center of the Creech AFB airfield complex. The 432 OSS/OSW will also mission meteorological watch (MISSIONWATCH) all areas and routes in which Creech AFB flying units are conducting operations. These areas include, but are not limited to, the Nevada Test & Training Range (NTTR), which covers approximately 12,000 square miles of airspace and is located between Las Vegas and Tonopah in Southwestern Nevada and five adjacent geographical areas, the Utah Test and Training Range (UTTR) located in northern Utah which covers approximately 19,000 square miles of restricted airspace, and Range

2502 located at the National Training Center (NTC) at Ft Irwin in the Mojave Desert in southeastern California.

1.7. Operating Hours and Contact Information.

1.7.1. Staff services are available from 0730 PT to 1630 PT, Monday through Friday, except federal holidays and authorized down days. 432 OSS/OSW leadership can be contacted at DSN 384-0339/Commercial 702-404-0339 or DSN 384-1254/Commercial 702-404-1254.

1.7.2. Weather technicians are available in the BWS to provide weather services 24-hours a day, 5 days a week, Monday-Friday, except federal holidays and authorized down days. Additional weather support outside of these hours must be coordinated with 432 OSS/OSW leadership at least 48 hours in advance to ensure personnel availability.

1.7.3. The 432 OSS/OSW forecasting/observing services can be contacted at the following numbers:

1.7.3.1. Primary -- DSN 384-1723/Commercial 702-404-1723

1.7.3.2. Secondary -- DSN 384-0559/Commercial 702-404-0559

1.7.3.3. Fax -- DSN 384-0160/Commercial 702-404-0160

1.8. Backup Weather Support. In the event that the 25th OWS can no longer provide support for the Creech Weather Flight, the Weather Flight will begin issuance of the terminal aerodrome forecast (TAF) and perform Meteorological Watch (METWATCH) on a 24/7 (limited METWATCH) basis. Responsibility for other 25 OWS products (e.g., graphical products) will be transferred to other agencies as necessary to continue weather information flow to Creech AFB personnel.

1.9. BWS Evacuation and Alternate Operating Location (AOL). If the 432 OSS/OSW is required to evacuate the BWS, the team will relocate to the AOL, which is located in Building 4060, and can be reached at DSN 384-0585.

1.9.1. The 25 OWS will assume the following duties until the 432 OSS/OSW resumes operations:

1.9.1.1. Perform METWATCH and MISSIONWATCH for 432 WG operations and issue all terminal and area weather watches, warnings and advisories to the best of their ability.

1.9.1.2. Mission Weather Products (MWPs). If the 432 OSS/OSW is unable to produce MWPs from the alternate site, the 25 OWS will produce and update the MWPs for the 432 WG using the 25 OWS standard format. The MWPs will be posted on the 25 OWS website under the Unit Tailored Pages link.

1.9.1.3. The 25 OWS will assume responsibility for all other MWPs for missions departing Creech AFB and conduct limited MISSIONWATCH for these flights.

1.9.2. Upon arrival at the AOL, the 432 OSS/OSW will standup operations, take an observation if the FMQ-19 is rendered unusable or augmentation for mandatory elements is required, assume the eyes forward function, and notify the Air Traffic Control Tower, Supervisor of Flying, 25 OWS, Airfield Management, Nellis AFB Command Post, 432 MOC, Operations Supervisors (11 RS/556 TES/30 RS/26 WPS), Creech AFB Fire

Department (99 CES OL-B), 432 OSS/OSW Flight Leadership, and the 57 OSS/OSW (Nellis Weather Flight).

1.9.3. The weather technician will provide the following services from the AOL:

1.9.3.1. Should the FMQ-19 be rendered unusable, take surface weather observations and disseminate observations via JET, AFW-WEBS, phone, or email to the 25 OWS. An observation will be taken within 15 minutes of arrival, containing at a minimum: prevailing visibility, present weather and obscurations, sky condition, wind direction and speed, temperature and dew point, and altimeter setting.

1.9.3.2. Continue to issue and update MWPs if the capability exists. The MWP will continue to be updated on the 432 OSS/OSW webpage if possible. If the webpage is inaccessible, the MWP will be emailed to the squadrons. If email is unavailable, the MWP will be verbally briefed via phone.

1.9.3.3. Provide METWATCH for Creech AFB from the AOL. Weather warnings, watches, and advisories will be issued through JET by the 432 OSS/OSW or the 25 OWS. If JET is unavailable, weather warnings, watches, and advisories will be disseminated via phone.

1.9.3.4. Brief aircrew and MISSIONWATCH. Briefings will be conducted via email, phone, or in-person at the new location.

1.9.4. PMSV radio support is not available at Creech AFB. If needed, the 432 OSS/OSW communicates with the Remotely Piloted Aircraft (RPA) aircrew via phone.

1.9.5. Timeliness and accuracy of services provided from the AOL may diminish somewhat due to limited communications and use of backup equipment.

1.10. Joint Environmental Toolkit (JET). The 432 OSS/OSW is the only agency on Creech AFB that receives weather data (i.e. watches, warning, advisories, and forecasts) via JET. All supported agencies on Creech AFB receive weather data from the 432 OSS/OSW or Nellis AFB Command Post via telephone and/or LAN. In the event the 432 OSS/OSW has to evacuate, supported agencies will continue to receive weather data via telephone and/or LAN.

1.11. Release of Weather Information.

1.11.1. Weather information required by a Safety Investigation Board or Accident Investigation Board will be requested through squadron leadership. For Creech AFB local weather, the request will be made to the 432 OSS/CC or DO. For 432d Wing Operations Center (WOC) weather, the request will be made to the 432 WOC Director. For 732 OG weather, the request will be made to the 732 OG/CC or DO.

1.11.2. Support to non-governmental agencies and the general public will not be provided until the 432 WG Public Affairs office has given approval. 432 WG Public Affairs can be reached at: DSN 384-1618 or Commercial 702-404-1618.

Chapter 2

AIRFIELD SUPPORT FUNCTION

2.1. Basic Weather Watch (BWW). During normal airfield operating hours, a BWW is normally conducted from the weather unit by weather personnel who, because of other weather operations duties, cannot monitor the weather continuously. Due to these other weather duties, weather personnel on duty may not detect and report all weather changes as they occur. The BWW observing program has been implemented to establish the minimum requirements needed to ensure the proper level of weather watch is maintained. During a BWW, weather personnel will recheck weather conditions, at intervals not to exceed 20 minutes since the last observation/check, to determine the need for an Aviation Selected Special Weather Report (SPECI) or LOCAL observation, when any of the following conditions are observed to be occurring or are forecast to occur within 1 hour:

2.1.1. Ceiling forms below or decreases to less than 5,000 feet.

2.1.2. Ceiling dissipates, or increases to equal or exceed 5,000 feet.

2.1.3. Visibility decreases to less than 5 miles (8,000 meters).

2.1.4. Visibility increases to equal or exceed 5 miles (8,000 meters).

2.1.5. Precipitation (any form).

2.1.6. Thunderstorms

2.1.7. Fog or Mist

2.1.8. In addition to the above minimum requirements, weather personnel will remain alert for any other changes in weather conditions that will require a SPECI observation (listed in Attachment 2). Weather personnel will also monitor local area observations and forecast products as often as necessary to keep abreast of changes expected to affect their area of responsibility.

2.1.9. When a reliable source (ATC personnel, pilots, law enforcement, etc.) reports weather conditions different from the last report, weather personnel will recheck the weather and, if required, disseminate a new observation.

2.2. Supplement Criteria. Weather personnel will perform a BWW from the weather station and be ready to supplement observations if the conditions listed below are forecasted to occur within 2 hours:

2.2.1. Tornado (+FC)

2.2.2. Funnel Cloud (FC)

2.2.3. Hail (GR)

2.2.4. Volcanic Ash (VA)

2.2.5. Remarks Section of Report

2.2.5.1. Funnel Cloud: Tornadic Activity B/E(hh)mm_LOC/DIR_(MOV)

2.2.5.2. Snow Depth (only during airfield operating hours and if heavy snow warning has been issued and snowfall is occurring).

2.2.6. Ceiling ≤5,000 ft (during operational hours only).

2.2.7. Visibility ≤ 5 miles (during operational hours only).

2.3. Backup Operations. BWS personnel will manually backup the FMQ-19 when the system/sensor(s) is/are not operational or unavailable due to sensor and/or communication failure, or when the output data is considered suspect. Weather personnel will make every attempt to log out any broken equipment, duty priorities permitting. Backup criteria are listed in Attachment 3. There is no requirement to back-up the system/sensor when the airfield is closed, unless tornadic activity is occurring or forecast to occur, then backup and supplement as necessary.

2.4. Cooperative Weather Watch. A Cooperative Weather Watch is the name given for the cooperation between weather personnel and control tower operators in identifying significant weather changes. The primary concern is the occurrence of previously unreported weather conditions that could affect flight safety or could be critical to the safety or efficiency of other local operations and resources. Due to the weather technician's limited view of the horizon, tower personnel will notify the weather technician of the occurrence of previously unreported weather conditions. These include prevailing visibility which meets special criteria as listed in Attachment 2; sector visibilities which differ from prevailing visibility, especially in the area where the weather technician's view of the horizon is restricted; beginning or ending of precipitation, thunderstorms or lightning; change of runway; and any other meteorological condition that could have a significant impact on the airfield. The assistance provided by control tower personnel will not interfere with their primary duties and does not reduce the responsibility of weather personnel to identify changes in weather conditions. When the control tower reports weather conditions different from the last disseminated observation, the weather technician will reevaluate the weather conditions. Based on reevaluation of the different weather conditions reported and local policy, the technician will:

2.4.1. Take and disseminate a SPECI observation if different conditions warrant immediate dissemination.

2.4.2. Include the report of the differing conditions in the next Aviation Routine Weather Report (METAR) or SPECI observation if the different conditions alone do not warrant immediate dissemination.

2.5. Eyes Forward.

2.5.1. The 432 OSS/OSW integrates weather radar data, meteorological satellite imagery, lightning detection readouts, and non-standard weather data systems to create an integrated weather picture and near-term trend forecast for the 25 OWS. Eyes forward yields meaningful meteorological information not contained in coded observations to the 25 OWS and is an integral part of the METWATCH for Creech AFB and ensures collaboration between the 25 OWS and 432 OSS/OSW on all forecasted products for Creech AFB. This collaboration ensures that all mission impacting weather elements are taken into consideration and ensures the most accurate and timely forecast products are provided to all supported units.

2.5.2. The 432 OSS/OSW will provide the eyes forward for the 25 OWS. The 432 OSS/OSW will contact the 25 OWS when:

2.5.2.1. Severe weather signatures on radar displays or Meteorological Satellite (METSAT) imagery are identified that will affect the Creech AFB installation or mission.

2.5.2.2. Warning/advisory criteria are occurring or forecast to occur and the 25 OWS has yet to issue the warning/advisory. The 432 OSS/OSW will also contact the 25 OWS when warning/advisory criteria are forecast by the 25 OWS and are not expected to occur. The 432 OSS/OSW will ensure the 25 OWS receives all severe weather reports in the area of concern (e.g., from National Weather Service, local news media, and unit/base personnel).

2.5.2.3. Local weather phenomena are forecast to occur (next 30 minutes) and will affect 25 OWS and 432 OSS/OSW products (i.e., TAFs and MWPs). The 432 OSS/OSW will also contact the 25 OWS when significant forecast elements on 25 OWS products are not expected to occur. Communication is to help 25 OWS technicians anticipate changes and subsequently adjust forecast products.

2.5.2.4. Surface observations or other information (e.g., all pilot reports [PIREPs]) cause 25 OWS issued TAFs for Creech AFB to be "out of category" or weather information indicates 432 OSS/OSW issued MWPs will cross operational thresholds.

2.6. Surface Observation Site Limitations. The Airfield Support Function weather technician is physically located inside the BWS, Building 91, Third Street. The official observation point is located on the north side of Building 91 along runway 08-26. The field of view from this point is limited due to buildings and the surrounding Sheep Mountains to the east, the Spring Mountains to the south, and several smaller peaks west through north of the airfield.

2.7. Dissemination of Observations.

2.7.1. The 432 OSS/OSW is considered an automated weather station. The Air Force Weather approved observation dissemination system will take and disseminate observations 24 hours a day, 7 days a week.

2.7.2. The latest observations for Creech AFB are available via the 25 OWS webpage located at the following link: **https://ows.dm.af.mil/tailored_met/index.cfm?fuseaction=showunit&B_ICAO=KINS&UNIT_ID=32&BW=H&UF=M&aor=2**

2.7.3. Weather observation code breakdown is located in Attachment 10.

2.7.4. Special observation criteria are located in Attachment 2.

2.7.5. During normal airfield operating hours, the 432 OSS/OSW will have a certified weather technician ready to augment the FMQ-19 observation to add operationally significant weather information that is either not within the capability of the FMQ-19 to report or is based on Operational Risk Management (ORM).

2.7.6. See Attachment 13 for location of Creech AFB weather equipment.

2.8. Backup Dissemination.

2.8.1. If the FMQ-19 becomes inoperative, manual observations will be disseminated using JET.

2.8.2. If JET becomes inoperative, observations will be disseminated locally by phone to the Air Traffic Control Tower, SOF, Base Operations, and MOC. Observations will be disseminated long line by using AFW-WEBS and/or contacting the 25 OWS forecaster.

Chapter 3

MISSION INTEGRATION FUNCTION

3.1. Terminal Aerodrome Forecast (TAF).

3.1.1. Weather technicians at the 25 OWS will prepare and disseminate a Creech AFB TAF through JET at 0900Z, 1700Z, and 0100Z and cover a 30-hour period. 432 OSS/OSW weather technicians will collaborate with 25 OWS weather technicians to develop these forecast products. 432 OSS/OSW weather technicians tailor to finer detail the 25 OWS issued TAF when issuing local forecast products.

3.1.1.1. Below is a sample Creech AFB TAF:

Figure 3.1. Creech AFB TAF

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KINS 0811/0917 VRB05KT 9999 BKN070 OVC110 620709 QNH3009INS
BECMG 0816/0817 28009KT 9999 SCT060 BKN120 QNH3012INS
BECMG 0822/0823 32012G18KT 9999 SCT060 SCT120 QNH3014INS
BECMG 0904/0905 32009KT 9999 FEW080 SCT120 QNH3016INS T14/0823Z
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3.1.1.2. See Attachment 10 for TAF code breakdown.

3.1.2. Specification and Amendment Criteria. The TAF Specification and Amendment criteria are listed in Attachment 4 and are specified IAW AFMAN 15-129V1 and mutually agreed upon criteria specific to the mission needs of customers at Creech AFB.

3.1.3. Dissemination of TAF.

3.1.3. 1 The 25 OWS will disseminate the TAF. The current Creech AFB (KINS) TAF is available via the 25 OWS webpage located at the following link: **https://ows.dm.af.mil/tailored_met/index.cfm?fuseaction=showunit&B_ICAO=KINS&UNIT_ID=32&BW=H&UF=M&aor=2**

3.1.4. Backup TAF Dissemination. If JET is inoperative, forecasts will be disseminated via AFW-WEBS, or if web access is unavailable, via email, fax or phone.

3.2. Mission Weather Products (MWPs).

3.2.1. The MWP will be produced by the 432 OSS/OSW. Several MWPs will be issued per day with amendments issued when necessary. The first MWP of the day will be posted to the 432 OSS/OSW webpage no later than 3 hours prior to the first launch.

3.2.2. The MWP amendment criteria are based on MQ-1B/MQ-9 mission-limiting thresholds. The MWP will be amended when weather conditions cross thresholds listed in Table A9.1 and A9.2 and/or when any Weather Watches, Warnings, or Advisories (WWAs), listed in Chapter 5, are issued and/or cancelled. Refer to the 432 OSS/OSW SharePoint page for the current MWP: **https://creech.eim.acc.af.mil/org/432d/432og/432oss/OSW/default.aspx**

3.2.3. Should the Creech weather forecaster disagree with the 25 OWS forecaster, the Creech MWP will be the decision-making product for Creech AFB operations.

3.3. Mission Meteorological Watch (MISSIONWATCH). The 432 OSS/OSW will conduct a continuous MISSIONWATCH of all routes and flying areas used by Creech AFB flying units during the times they are using them. The 432 OSS/OSW will relay Observed Weather Advisories detailed in Table 5.5 and any significant changes in weather conditions previously briefed to the SOF. During emergency situations or rapidly changing conditions, the 432 OSS/OSW will immediately notify the SOF and all affected flying units.

3.4. Flight Weather Briefings. The 432 OSS/OSW will provide flight weather briefings verbally or using the DD Form 175-1 to all assigned aircraft and transient aircraft in accordance with published duty priorities.

3.5. Space Weather Support. Space weather impacts for Creech AFB are included in the MWPs. The 432 OSS/OSW also provides links to Space Weather Support via the 432 OSS/OSW webpage and briefs primary products at the monthly Instrument Refresher Course briefings. Information available includes space weather impacts on radio frequencies and the Global Positioning System (GPS).

3.5.1. For Space Weather Support products, refer to the following Space Weather Main Page available via AFW-WEBS: **https://weather.af.mil/confluence/display/AFWWEBSTBT/Space+Weather+Main+Page**

3.6. Toxic Corridors. The 432 OSS/OSW will provide the 99 CES (Fire Department) and/or Creech Recovery Team (CRT) with weather information so they can calculate toxic corridors for chemical spills. The 432 OSS/OSW will not be responsible for producing toxic corridors.

3.7. Chemical Downwind Messages. The 432 OSS/OSW will provide Chemical Downwind Messages to the CRT upon request for disaster response, chemical/nuclear attack, and exercise purposes.

3.8. Target Acquisition Weapons Software (TAWS) Data. The 432 OSS/OSW will provide TAWS data for flight planning purposes upon request. TAWS data must be requested 1-2 hours in advance to allow for data preparation.

Chapter 4

STAFF INTEGRATION FUNCTION

4.1. Wing Briefings. The 432 OSS/OSW will present a briefing at the 432 WG Wing Activity Report (WAR) meeting. The content of the briefing consists of weather data for ongoing combat missions as well as local weather for Creech AFB and local ranges. 432 OSS/OSW will also provide a briefing at the weekly 432 Wg Staff Meeting. The briefing will cover Creech and other areas of interest to Wing leadership.

4.2. Command Support. The 432 OSS/OSW, when requested, will provide weather briefings to the Creech AFB Command Support Staff and CRT as necessary. The format of the briefing will be tailored to the scenario driving the request.

4.3. Instrument Refresher Course (IRC). A 432 OSS/OSW representative will provide a weather effects briefing to all IRC classes. The briefing format is fixed and includes expected seasonal weather conditions and impacts for both downrange combat and Creech AFB training operations. IRC schedulers will provide the 432 OSS/OSW with a schedule of upcoming IRC classes as early in the process as possible.

4.4. Climatology Support.

4.4.1. Daily climatic data for Creech AFB will be sent to the 14th Weather Squadron, and to others, when requested.

4.4.2. Other climatological data for Creech AFB and other locations will be available upon request. Requests should be made at least two business days in advance in order to allow the 432 OSS/OSW to research and compile the data.

4.5. Air Traffic Control (ATC) Training/Orientation.

4.5.1. The 432 OSS/OSW will provide training and initial/annual certification for ATC personnel on METAR code, TAF code, and visibility determination. Training and certification will be conducted upon advanced coordination with the 432 OSS/OSW.

4.5.2. The 432 OSS/OSW will provide training/orientation to all SOF and Senior Operations Officers (Operations Superintendent) as required.

4.6. Pre-deployment Planning

4.6.1. Upon request, 432 OSS/OSW will provide weather support for pre-deployment planning. Requests should be made as early in advance as possible in order to allow for coordination of operational requirements and areas of interest.

Chapter 5

RESOURCE PROTECTION

5.1. General.

5.1.1. Certain weather conditions endanger property or life, pose a safety hazard, or adversely affect a supported agency's operations. The 25 OWS and 432 OSS/OSW will monitor observations and forecasts for these conditions and advise supported agencies when these conditions are observed or forecasted. Weather watches, warnings and advisories (WWAs) are the vehicles through which supported agencies are notified of these critical weather conditions.

5.1.2. The 25 OWS will generally issue *forecast* weather watches and warnings for Creech AFB. Time permitting, all watches and warnings will be coordinated with the 432 OSS/OSW prior to issuance.

5.1.3. The 432 OSS/OSW will issue forecast weather watches and/or warnings if threatening weather conditions that could impact the mission or resources are imminent and a forecast watch/warning has not been issued by the 25 OWS and prior coordination with the 25 OWS is not practical or communications do not allow. The 432 OSS/OSW will supersede existing 25 OWS issued forecast weather watches and warnings if a forecast weather watch and/or warning has been issued by the 25 OWS, but does not accurately reflect the onset or severity of the threatening weather conditions expected for Creech AFB. Additionally, the 432 OSS/OSW reserves the right to issue weather watches and warnings when temporal or resource constraints prevent the 25 OWS from issuing forecasted weather watches and warnings for Creech AFB. In the event that the 432 OSS/OSW issues a forecast weather watch and/or warning, the 432 OSS/OSW will be responsible for local dissemination and will contact the 25 OWS as soon as possible afterward so the 25 OWS can assume responsibility/accountability.

5.1.4. The 25 OWS issues weather watches, warnings, and advisories for Creech AFB using the Integrated Weather Warning Capability system (IWWC) which disseminates the information via phone calls and through JET.

5.1.5. Desired Lead Time. Advanced warning of threatening weather conditions allows local agencies to take specific actions prior to occurrence. The desired lead-time is the minimum amount of advanced notice an agency requires prior to the onset of a particular weather phenomenon.

5.1.6. All weather watches, warnings, and advisories are issued IAW AFMAN 15-129V1 and AFMAN 15-129V2. Warnings and advisories may be issued as forecast or observed. In addition, advisories may be issued as either Terminal (within 5nm of Creech AFB) or Flying Area (within 432 WG operating areas).

5.2. Responsibilities.

5.2.1. The 25 OWS will:

5.2.1.1. Perform a continuous Terminal METWATCH for Creech AFB.

5.2.1.2. Issue all watches, forecast weather warnings, and forecast weather advisories.

5.2.1.3. Verify Command Post has received 25 OWS issued weather watches, warnings and advisories via IWWC/JET or telephone contact.

5.2.2. 432 OSS/OSW will:

5.2.2.1. Perform eyes forward function.

5.2.2.2. Issue all *observed* weather advisories and the *observed* weather warning for lightning during duty hours. The 25 OWS will assume all responsibilities when the 432 OSS/OSW is closed.

5.2.2.3. Notify the 25 OWS when local mission-watch indicates a 25 OWS-issued watch, warning, or advisory is, or may become, unrepresentative of current or expected weather conditions.

5.2.2.4. During duty hours, notify the following agencies via phone of all issued, cancelled or amended WWAs:

5.2.2.4.1. Air Traffic Control Tower

5.2.2.4.2. Supervisor of Flying

5.2.2.4.3. Maintenance Operations Center

5.2.2.4.4. Airfield Management

5.2.2.4.5. 25 OWS

5.2.2.4.6. Nellis AFB Command Post (Warnings and Lightning Watch only)

5.2.2.5. Disseminate via the ACC Emergency Notification System (EMNS) any weather warnings or lightning watches.

5.2.3. The Nellis AFB Command Post will:

5.2.3.1. Monitor weather information disseminated via the automated dissemination system (IWWC).

5.2.3.2. Assume responsibility for required WWA dissemination via EMNS when the 432 OSS/OSW is closed (non-duty hours).

5.2.3.2.1. Disseminate all weather warnings received from the 25 OWS to Creech All Personnel.

5.2.3.2.2. Disseminate the Lightning Watch to Creech All Personnel. This is the only Watch to be disseminated to Creech All Personnel.

5.2.4. Airfield Operations will:

5.2.4.1. Monitor weather information disseminated via the 25 OWS webpage and acknowledge all weather watches, warnings and advisories issued by the 25 OWS via IWWC.

5.2.4.2. Disseminate weather watches, warnings and advisories to airborne aircraft.

5.2.4.3. When called by the 432 OSS/OSW, acknowledge receipt of the weather watch, warning, or advisory. The 432 OSS/OSW should not have to read the text of the weather

watch, warning, or advisory to Airfield Operations unless the 25 OWS webpage is down or IWWC is not functioning properly.

5.2.4.4. Relay all pilot reports of weather information to the 432 OSS/OSW.

5.2.4.5. Participate in the Cooperative Weather Watch Program. This requires notification to the weather technician when any of the weather conditions listed in paragraph 2.2 occurs and is not in the latest available observation.

5.2.4.6. Publish 432 OSS/OSW hours of operation in the Flight Information for Pilots (FLIP) and provide copies of these publications to the 432 OSS/OSW.

5.2.4.7. Ensure the 432 OSS/OSW is included in all notifications via the secondary crash net.

5.2.5. Air Traffic Control will:

5.2.5.1. Monitor weather information disseminated via JET.

5.2.5.2. Ensure the Air Traffic Information System (ATIS) is updated to reflect current weather watches, warnings, and advisories.

5.2.5.3. Relay all runway and wind sensor changes to the 432 OSS/OSW.

5.2.5.4. Notify the 432 OSS/OSW when wind equipment:

5.2.5.4.1. Is inoperative

5.2.5.4.2. Readings differ from visual references5.2.5.5. Relay all pilot reports of weather information to the 432 OSS/OSW.

5.2.5.6. Provide air traffic control indoctrination training to the 432 OSS/OSW personnel upon request.

5.2.5.7. Supervisor of flying will ensure they receive a face to face weather briefing from the duty forecaster prior to assuming shift duties.

5.3. WWA Verification. IAW AFMAN 15-129V1, *forecast* weather warnings and advisories issued with lead-times are verified using an expanding verification radius, not to exceed 15 nautical miles (nm), which is independent of the specification distance (within 5 nm of Creech AFB). As the desired lead-time increases, so does the verification radius.

5.3.1. For example, a weather warning that requires a 60 minute lead-time will be issued when the warning criteria is expected to occur within 5 nm of Creech AFB, but can be verified if the warning criteria occurs within a 10 nm radius.

5.3.2. A weather warning that requires a 120 minute lead-time will be issued anytime the warning criteria is expected to occur within 5 nm of Creech AFB, but can be verified if the warning criteria occurs within a 15 nm radius.

Table 5.1. Desired Lead-Time vs. Verification Range

Desired Lead Time	Verification Radius
0 minutes (observed criteria)	5 nm
15 minutes	5 nm
30 minutes	5 nm
45 minutes	7.5 nm
60 minutes	10 nm
90 minutes	12.5 nm
120 minutes	15 nm
180 minutes	15 nm

5.4. Weather Watches. A weather watch is a special notice of a forecasted condition based on potential alone. When notified, the customer takes action to prepare for the possible condition indicated.

5.4.1. The 25 OWS duty forecaster issues weather watches for Creech AFB. Weather watches cover the area within 5nm of the center of the aerodrome complex. Refer to Attachment 8 for justification and supported agencies response to weather watches. Table 5.2 lists *forecast* weather watch criteria.

Table 5.2. Creech AFB Forecast Weather Watch Criteria.

Criteria	Desired Lead Time
1. *Tornado	As potential warrants
2. *Severe Thunderstorm (Winds ≥ 50 knots and/or hail ≥ ¼ inch)	As potential warrants
3. *Damaging Winds ≥ 50 knots	As potential warrants
4. Strong Winds ≥ 35 < 50 knots	As potential warrants
5. Freezing Precipitation	As potential warrants
6. Heavy Rain (≥2 inches in 12 hours)	As potential warrants
7. Heavy Snow (≥2 inches in 12 hours)	As potential warrants
8. Lightning (potential within 5nm exists)	30 Minutes
* Severe Weather Action Plan (SWAP) criteria	

5.5. Weather Warnings. A weather warning is a special notice of a forecast or observed weather condition that poses a hazard to life or property. When notified of this condition, the supported unit takes protective action.

5.5.1. The 25 OWS duty forecaster issues forecast weather warnings for Creech AFB. Weather warnings cover the area within 5nm of the center of the aerodrome complex. Refer to Attachment 8 for justification and supported agencies response to weather warnings. Table 5.3 lists *forecast* weather warning criteria.

Table 5.3. Creech AFB Forecast Weather Warning Criteria.

Criteria	Desired Lead Time
1. *Tornado	30 minutes
2. *Severe Thunderstorm (Winds ≥ 50 knots and/or hail ≥ ¼ inch)	120 minutes
3. *Damaging Winds ≥ 50 knots	120 minutes
4. Strong Winds ≥ 35 < 50 knots	90 minutes
5. Freezing Precipitation	90 minutes
6. Heavy Rain (≥2 inches in 4 hours)	60 minutes
7. Heavy Rain (≥2 inches in 12 hours)	60 minutes
8. Heavy Snow (≥2 inches in 12 hours)	60 minutes
* Severe Weather Action Plan (SWAP) criteria	

5.5.2. The 432 OSS/OSW will issue an observed weather warning for within 5nm of Creech AFB runway complex. During non-duty hours, the 25 OWS will issue this *observed* weather warning. Refer to Attachment 8 for justification and supported agencies response to observed weather warnings. Table 5.4 lists *observed* weather warning criteria.

Table 5.4. Creech AFB Observed Weather Warning Criteria.

Criteria	Desired Lead Time
1. Lightning within 5 NM	Observed (432 OSS/OSW issued during duty hours)

NOTE: Lightning warnings are not issued until lightning is observed, either visually or via The National Lightning Detection Network. The lightning warning will remain valid until lightning has not occurred in the area for at least 15 minutes. A lightning warning will not be cancelled if a thunderstorm is within 5 nm (as observed on radar). The 432 OSS/OSW will provide timely notification to all supported units upon issuance and expiration of a lightning warning.

5.6. Weather Advisories. A weather advisory is a special notice to an operational agency of environmental conditions impacting operations.

5.6.1. *Forecasted* Weather Advisories. The 432 OSS/OSW does not issue any forecasted weather advisories.

5.6.2. *Observed* Weather Advisories. The 432 OSS/OSW will issue an observed terminal weather advisory for Creech AFB when the criteria defined in Table 5.5 occurs. Weather advisories cover the area within 5nm of the center of the aerodrome complex, unless otherwise noted. Refer to Attachment 8 for justification and supported agencies response to *observed* weather advisories.

Table 5.5. Creech AFB Observed Weather Advisory Criteria.

Criteria	Desired Lead Time
1. *Surface winds $\geq$ 25 knots but < 35 knots	Observed
2. Surface crosswinds > 15 knots	Observed
3. Moderate or Greater Turbulence within 100nm (Surface – 10,000 ft MSL) Not Associated with Thunderstorms	Observed
4. Any Intensity Icing within 100nm (Surface – 10,000 ft MSL) Not Associated with Thunderstorms	Observed
5. Low-level wind shear	Observed
6. Surface Temperatures $\leq$ 40°F	Observed
7. Lightning within 25nm	Observed
8. Lightning within 10nm	Observed
*Issued by 25 OWS during non-duty hours	

5.7. Dissemination of WWAs. WWAs are disseminated to base agencies through IWWC and are numbered sequentially by month followed by a three digit alphanumeric code, indicating the number of events issued that month. The first event in August would be number 08-001 or 08-A01). (*NOTE*: Each warning is a separate entity and only one warning will be in effect at one time for Creech AFB, except for forecast tornado warnings and/or observed lightning warnings). Telephone confirmation will be used to ensure the command post, base operations, MOC, and the tower/SOF has received them. If IWWC is inoperative, warnings, watches, and advisories will be disseminated by phone to the same agencies.

5.8. WWA Text Format. The text of WWAs will contain the warning/watch/advisory number, the specific valid time period (until further notice for observed products), and specific conditions expected. More than one advisory may be in effect at the same time. The following additional requirements apply to warnings issued for criteria other than observed lightning or forecast tornado:

5.8.1. Only one warning will be in effect at a time, and it will include all elements meeting warning criteria.

5.8.2. When a warning or advisory no longer adequately describes the phenomenon's expected occurrence, a completely new warning or advisory will be issued with a new number.

5.8.3. Warnings and watches issued to extend the valid time will not be re-issued or re-numbered. These will include the explanation "This is an extension of Weather Warning # (current warning)."

5.8.4. When the weather technician believes that phenomena meeting WWA criteria are no longer expected during the valid time, they will be canceled with the explanation "Weather Warning # (current warning) is canceled."

5.9. Severe Weather Action Plan (SWAP) Procedures. These procedures are in place to ensure sufficient personnel are available during potential/actual severe weather events or during meteorological/operational events critical to mission success. For the purposes of these procedures severe weather is defined as any weather phenomenon considered critical enough by the supported unit to require advance/special notice and subsequent actions to prevent serious injury or damage to personnel, property, or resources. It is imperative that timely and accurate WWAs are disseminated to all Creech AFB agencies to ensure personnel and resource protection. These procedures document a two-tier system with the 432 OSS/OSW and the 25 OWS sharing responsibilities for SWAP and resource protection.

5.9.1. 432 OSS/OSW Responsibilities. 432 OSS/OSW will perform the SWAP responsibilities as defined in AFMAN 15-129V2, AFI 10-229, *Responding to Severe Weather Events*, and AFI 10-206 *Operational Reporting*. More specifically, the 432 OSS/OSW will accomplish the following procedures:

5.9.1.1. Notification. The on-duty weather technician will notify the Severe Weather Action Team (SWAT) standby member(s) according to the following guidance:

5.9.1.1.1. During normal staff duty hours (0730 to 1630 PDT, Monday through Friday, except federal holidays/authorized down days) the weather forecaster will implement SWAP by notifying the WF Commander, the WF Chief, Wing Weather Officer (WWO) and/or the SWAT standby member in their office or cell phone whenever one or more conditions in Table 1.2 are met. It is likely that the above personnel are present in the weather station and do not need to be recalled/activated.

5.9.1.1.2. During nights, weekends and federal holidays/authorized down days the weather forecaster will implement SWAP by notifying the SWAT standby member, as indicated on the current duty schedule, by home phone or cell phone whenever one or more conditions in Table 1.2 are met to determine if the SWAT is to be activated.

Table 5.6. Conditions Requiring Notification/Activation of SWAT Standby Member.

Weather Condition	Desired Notification/ Activation Lead Time
1. Tornado	As potential warrants
2. Winds $\geq$ 50 knots	As potential warrants
3. Hail $\geq$ ¼ inch	As potential warrants
4. Any other event or situation that the duty forecaster deems necessary of notification	As Required
5. In the event of unforeseen circumstances, such as a communications line failure, a critical equipment outage at the 25 OWS or 432 OSS/OSW, the 432 OSS/OSW will implement the SWAP at the 25 OWS' request. The 25 OWS, as the agency ultimately responsible for forecast watch/warning support, will have this prerogative in the interest of Creech AFB resource protection and flight safety.	As Required

5.9.1.2. Activation. The weather technician on duty will discuss the meteorological situation, manning requirements, and the recall of additional personnel (or place on standby) with the SWAT standby member. (If the SWAT standby member is unavailable, coordinate with the 432 OSS/OSW Flight Commander, NCOIC, or Assistant NCOIC). If deemed necessary, the SWAT standby member will report to the weather station no later than 1 hour after notification by the weather forecaster or as soon as possible. Once the SWAT standby member has arrived, they will assist in evaluating the situation, determine the need to recall additional personnel, and execute the SWAP duties/responsibilities in Attachment 12.

5.9.1.3. Upon arrival at the weather station the SWAT standby member, time permitting, will conduct a METCON with the 25 OWS Technician/Zone Supervisor.

5.9.1.4. Post Event Procedures. If severe weather actually occurs, the following procedures will be executed, if necessary:

5.9.1.4.1. OPREP-3 Reporting procedures. When damage to the installation or aircraft has occurred due to weather, provide the information in Attachment 14 to the 432 OSS/CC and the Nellis AFB Command Post. Also, 432 OSS/OSW will ensure that the 25 OWS and ACC Weather Functional Staff are aware of the reported weather event.

5.9.1.4.2. If the event is to be used as one of the semi-annual SWAP tests, complete a memorandum for record documenting the event. Also, contact 25 OWS flight leadership and provide them with the memorandum or an e-mail for their records.

5.9.1.5. The 432 OSS/OSW home and cell phone numbers will be reviewed monthly or when a change in personnel occurs to ensure the most current contact information is available for SWAP, if needed.

Chapter 6

RECIPROCAL SUPPORT

6.1. General. The agencies listed in this chapter will provide services as described below.

6.2. 432d Wing. IAW AFI 10-229, *Responding to Severe Weather Events*, the Installation Commander (99 ABW) will chair a review of installation severe weather preparedness, capabilities, requirements, and procedures, no less than annually.

6.3. 432d Operations Group Commander.

6.3.1. Establish weather support requirements and procedures with the 432 OSS/OSW.

6.3.2. Notify the 432 OSS/OSW of all changes in mission weather support.

6.4. Flying Squadrons conducting operations/missions at Creech AFB.

6.4.1. Notify 432 OSS/OSW of any scheduled flights outside the NTTR at least 24 hours in advance to coordinate flight weather briefing support.

6.4.2. Notify 432 OSS/OSW at least 24 hours in advance for mass briefings.

6.4.3. Notify 432 OSS/OSW of any flying schedule changes as soon as possible. In particular, 432 OSS/OSW should be notified of any weekend flying support requirements 5 duty days in advance.

6.4.4. Ensure all pilot reports (PIREPs) are relayed to BWS personnel in a timely manner.

6.4.5. Provide at least 72-hour notice for IRC lectures or seasonal safety presentations.

6.4.6. Provide feedback on MWPs to 432 OSS/OSW.

6.5. Supervisor of Flying (SOF).

6.5.1. Obtain a weather briefing prior to assuming SOF duties.

6.5.2. Relay all PIREPs to the weather technician (especially working areas) within 5 minutes of receipt.

6.6. 432d Maintenance Operations Center (MOC).

6.6.1. Notify duty technician of any weather-dependent maintenance activities requiring weather support.

6.6.2. Establish procedures to ensure affected maintenance activities are promptly notified of all applicable Weather Warnings, Watches and Advisories.

6.7. 432d Operations Support Squadron/Airfield Management.

6.7.1. Notify 432 OSS/OSW of in-flight emergencies inbound to Creech AFB.

6.7.2. Include appropriate weather information in the Flight Information Publications (FLIP). Required changes will be submitted when requested by the 432 OSS/OSW.

6.7.3. Relay weather warnings, watches, and advisories to the agencies listed in Attachments 5 and 6.

6.7.4. Notify 432 OSS/OSW of weather communications equipment outages. When weather communication equipment is not operational, weather information will be available via the 25 OWS webpage or disseminated via phone by the weather technician.

6.7.5. Notify the 432 OSS/OSW of aircraft mishaps/incidents at, or in the vicinity of Creech AFB and all aircraft mishaps involving Creech AFB based aircraft.

6.7.6. Notify 432 OSS/OSW of any changes to normal airfield operating hours. This includes the notification of early opening and closing of the airfield.

6.8. 432d Operations Support Squadron/Air Traffic Control.

6.8.1. Notify 432 OSS/OSW of weather communications equipment outages. When weather communication equipment is not operational, weather information will be available via the 25 OWS webpage or disseminated via phone by the weather technician.

6.8.2. Notify 432 OSS/OSW via hotline or other suitable means of runway and runway light setting changes.

6.8.3. Control Tower personnel will receive local weather training prior to certification. The 432 OSS/OSW will assist with initial training/familiarization, but tower personnel will administer recurring training with 432 OSS/OSW assistance as necessary.

6.8.4. Provide a cooperative weather watch as outlined in paragraph 2.2.

6.8.5. Provide weather personnel with initial ATC indoctrination.

6.8.6. Relay PIREPs to the weather flight within 5 minutes of receipt.

6.9. 432d Wing/Safety.

6.9.1. Notify 432 OSS/OSW of any local aircraft mishap/incidents where weather or weather service may have been a factor.

6.9.2. Notify the 432 OSS/OSW of any damage on Creech AFB caused by weather.

6.9.3. Coordinate with 432 OSS/OSW on all messages containing references to weather.

6.9.4. Provide information and requests regarding archiving weather data regarding aircraft mishaps.

6.10. 799th Security Forces Squadron. Notify the 432 OSS/OSW of observed hail, tornadoes, freezing precipitation, or other significant weather encountered during routine patrols.

6.11. Range Support Services.

6.11.1. Provide emergency backup power to the weather station equipment at Building 91, Third Street.

6.11.2. Notify 432 OSS/OSW prior to planned switches from commercial power to backup power and back to commercial power, which will affect weather equipment at Building 91 Third Street.

6.12. 799th Air Base Squadron/SCOS.

6.12.1. The 432 OSS/OSW uses a wide range of equipment to determine the current state of the atmosphere. These critical systems are used continuously to provide customers the most timely, accurate and relevant weather intelligence possible. The 432 OSS/OSW is heavily

dependent on network and internet connectivity to access and disseminate forecasts, observations, watches, warnings, advisories, satellite, radar, and lightning data. 799th Air Base Squadron Communications Flight is responsible for maintaining the local network infrastructure that connects the OSW with resources on the base and enables access to resources off the base. Should an network issue arise outside of the purview and control of the Communications Flight, the Communications is responsible for elevating and tracking the issue and ticket to the appropriate agency or organization until it is resolved. The Communications flight is also responsible for providing 24-hour notice of any scheduled downtime or interruption of service, as available.

6.12.2. Table 6.1. lists weather systems that are network and internet dependent for successful OSW operations.

Table 6.1. Weather Systems Information.

EQUIPMENT	Description	Type Outage	MISSION IMPACT	Backup Equipment
Joint Environmental Toolkit (JET) **See Note 1**	Single, fully integrated system of weather analyses, forecasting, and dissemination	Emergency	Significant	25th Operational Weather Squadron
AN/FMQ-19 Automated Meteorological Station (AMS)	Primary piece of weather equipment at Creech AFB. There are direct readouts in the 432 OSS/OSW and ATC.	Routine	Significant	Tactical Meteorological Observation System-Pole Mounted (TMOS-P*), Kestrel*
Tactical Meteorological Observation System-Pole Mounted (TMOS-P*), **See Note 2**	Secondary piece of weather equipment at Creech AFB. There are direct readouts in the 432 OSS/OSW and ATC.	Routine	Significant	Kestrel
MARK IVB SATELLITE	Displays real-time satellite imagery.	Routine	Minimal	25 OWS and/or AFW-WEBS
Lightning Detection System **See Note 3**	Stand-alone workstation displaying National Lightning Detection System feed.	Routine	Minimal	AFW-WEBS

6.12.2. *Data obtained must be identified in observations as estimated.

Note 1: JET equipment is maintained by an Air Force Weather Agency contract.

Note 2: TMOS-P is currently maintained by the 432 OSS/OSW.

Note 3: Repair to the Lightning Detection System equipment must be accomplished by the vendor on an as-needed basis to meet the 100% operational capability.

6.13. Joint Range Technical Services.

6.13.1. Provide routine and emergency maintenance for weather equipment located on Creech AFB.

6.13.2. Table 3.2. lists weather equipment required to be maintained by the Joint Range Technical Services personnel.

Table 6.2. Weather Equipment Information.

EQUIPMENT	Description	Type Outage	MISSION IMPACT	Backup Equipment
AN/FMQ-19 Automated Meteorological Station (AMS)	Primary piece of weather equipment at Creech AFB. There are direct readouts in the 432 OSS/OSW and ATC.	Routine	Significant	Tactical Meteorological Observation System-Pole Mounted (TMOS-P*), Kestrel*

6.13.3. *Data obtained must be identified in observations as estimated **Note 1:** TMOS-P is currently maintained by 432 OSS/OSW.

6.14. 99th Aerospace Medical Squadron/Bioenvironmental Engineering Flight. 99 AMDS/SGPB is the OPR for all Bioenvironmental Engineering issues for Creech AFB. One exception applies to measurement of the Wet Bulb Globe Temperature (WBGT). This measurement is typically a function of Bioenvironmental Engineering which is not present at Creech AFB. Due to the distance, elevation, and environment change between Creech AFB and Nellis AFB, a measure of the WBGT taken at Nellis AFB is not accurate enough to support the mission requirements of Creech AFB. Therefore, the 432 OSS/OSW will provide the WBGT measurement for Creech AFB utilizing similar equipment with the same abilities as Nellis AFB and communicate the corresponding flag conditions through the ADHOC service.

Chapter 7

TROPICAL WEATHER

7.1. General.

7.1.1. The hurricane season lasts from June through November; however, hurricanes have occurred at other times throughout the year. Creech AFB is not located in a hurricane threat zone; however, Creech AFB may experience remnants of a tropical system that has exited the US Gulf Coast region or the Eastern Pacific Ocean. Serious threats that can occur with the hurricane and other tropical systems include tornadoes, extreme wind gusts, and flash flooding.

7.1.2. The U.S. National Hurricane Center (NHC) establishes policies, procedures and responsibilities for the North Atlantic and Eastern Pacific. As such, the NHC is the central clearinghouse for all tropical cyclone forecasts and observations occurring in these areas, regardless of their effect on the United States.

7.1.3. The 25 OWS & 432 OSS/OSW will use the tropical cyclone forecasts issued by the NHC. Deviation from the official forecast position, track, movement, maximum wind speed, or intensity trend are not authorized.

7.1.4. The 432 OSS/OSW will append the Tropical Cyclone-Threat Assessment Product (TC-TAP) forecasts from the 25 OWS website to the end of all MWPs when any tropical depression, tropical storm, or hurricane is forecasted to be within 300nm of Creech AFB. This information will contain any forecast probability errors from the forecast discussion bulletins going out to 48 hours or more. This information is for planning purposes only.

RICHARD H. BOUTWELL, Colonel, USAF
Commander, 99 ABW

Attachment 1

GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION

References

AFPD 15-1, *Atmospheric and Space Environment Support,* 19 Feb 2010

AFI 10-206 *Operational Reporting,* 6 Sep 2011

AFI 10-229, *Responding to Severe Weather Events,* 15 Oct 2003

AFI 15-128, *Air Force Weather Roles and Responsibilities,* 7 Feb 2011

AFMAN 15-111, *Surface Weather Observations,* 27 Feb 2013

AFMAN 15-124, *Meteorological Codes,* 28 Feb 2013

AFMAN 15-129V1, *Air and Space Weather Operations – Characterization,* 6 Dec 2011

AFMAN 15-129V2, *Air and Space Weather Operations – Exploitation,* 7 Dec 2011

Abbreviations and Acronyms

ACFT MISHAP—Aircraft Mishap

AFW—Air Force Weather

AFWA—Air Force Weather Agency

ALSTG—Altimeter Setting

AMD—Amendment

AOL—Alternate Operating Location

AOS—Automated Observing System

ATC—Air Traffic Control

BKN—Broken

BWW—Basic Weather Watch

CAT—Clear Air Turbulence

CB—Cumulonimbus

CWW—Continuous Weather Watch

DLT—Desired Lead Time

EO—Electro-Optics

ETA—Estimated Time of Arrival

ETD—Estimated Time of Departure

FLIP—Flight Information Publication

FWA—Forecast Weather Advisory

GPS—Global Positioning System

GTE—Greater Than or Equal To

ICAO—International Civil Aviation Organization

IRC—Instrument Refresher Course

IWEDA—Integrated Weather Effects Decision Aid

JET—Joint Environmental Toolkit

KT—Knot

LLWS—Low-Level Wind Shear

LTE—Less Than or Equal To

MBWW—Modified Basic Weather Watch

METAR—Aviation Routine Weather Report

METCON—Meteorological Conference or Discussion

METWATCH—Meteorological Watch

METSAT—Meteorological Satellite

MISSIONWATCH—Mission Meteorological Watch

MOA—Memorandum of Agreement

MOAF—Military Operation Area Forecast

MWA—Military Weather Advisory

MWP—Mission Weather Product

NLT—No Later Than/Negative Lead Time

NM—Nautical Mile

NWS—National Weather Service

OSS—Operations Support Squadron

OVC—Overcast

OWA—Observed Weather Advisory

OWS—Operational Weather Squadron

OWW—Observed Weather Watch

PIREP—Pilot Weather Report

PMSV—Pilot –to-Metro Service

RCR—Runway Condition Reading

RVR—Runway Visual Range

SOF—Supervisor of Flying

SOP—Standard Operating Procedure

SPECI—Aviation Selected Special Weather Report

SWAP—Severe Weather Action Plan

SWAT—Severe Weather Action Team

TAF—Terminal Aerodrome Forecast

TAWS—Target Acquisition Weather Software

TOLD—Takeoff and Landing Data

VFR—Visual Flight Rules

VT—Valid Time

WA—Weather Advisory

WF—Weather Flight

WSD—Weather Support Document

WW—Weather Warning

Terms

Actual Lead-time— The elapsed time between issue time of a watch, warning, or advisory and the first occurrence of the event.

Aircraft Mishap— Term used to denote any event resulting in damage to, or destruction of any aircraft to include lightning strikes, inadvertent departure from the paved runway or taxiway surface, aircraft or Aerospace Ground Equipment (AGE) fires, and forced landings due to in-flight emergencies.

Amendment (AMD)— Used as a message modifier when transmitting an aerodrome forecast amendment.

Climatology— The historical records of weather conditions measured or observed at a specific location is known as climatology. Some data goes back over 100 years, but generally, a 10- to 25-year history is more common. Climatology is useful in planning operations beyond 5 to 7 days. It usually describes the average (or mean) conditions such as high and low temperatures and extremes.

Desired Lead-time (DLT)— The amount of advance notice a supported agency desires before the onset of a particular weather phenomenon.

Eyes Forward— Weather Flight technicians are the eyes forward for the technicians in the Operational Weather Squadron (OWS) and integrate weather radar data, meteorological satellite imagery, lightning detection readouts, and non-standard weather data systems (vertical profilers, mesonet data, etc.) to create an integrated weather picture and near-term trend forecasts for the OWS. Eyes forward yields meaningful meteorological information not contained in coded observation to the servicing OWS and is an integral part of the meteorological watch for an installation or contingency operating location.

Forecast Weather Advisory (FWA)— A weather advisory issued when the customer requires advance notification of an impending weather condition with sufficient time to allow for protective actions.

Issue Time— The time when an agency is notified of a watch, warning, or advisory. When more than one agency is notified, the issue time is the time the last agency is notified. Follow-up notifications are not considered when determining issue time.

LOCAL Observation—. An unscheduled observation taken when specific local criteria are met. All LOCALs shall be made as soon as possible after the relevant criteria are observed.

METAR Observation— Meteorological Aviation Report. A routine scheduled surface weather observation. It contains a report of wind, visibility, runway visual range, present weather, sky condition, temperature, dew point, and altimeter setting. In addition, significant remarks are appended to the METAR observation.

METWATCH— Monitoring aerospace weather for a route, area, or terminal and advising concerned organizations when phenomena that could affect their operations or pose a hazard to life or property are occurring or about to occur.

Mission Weather Product (MWP)— A customized weather product providing terrestrial and space weather data and forecasts for a specific mission, or set of missions. It fully integrates aerospace weather with the customer's tactics, weapon systems, environmental sensitivities of equipment, and other operational requirements.

MISSIONWATCH— The monitoring of aerospace weather for a specific mission (i.e., ground, air, or space) and informing supported agencies when un-forecast mission-limiting phenomena could impact operations.

Observed Weather Advisory (OWA)— A weather advisory issued when a particular weather event first occurs and the customer does not require advanced notification of the observed weather phenomena.

Operational Weather Squadron (OWS)— An organization comprised of management, technician, and training personnel responsible for providing regional weather support. Their mission is to produce theater-scale tailored weather forecast products and services to customers within their area of responsibility.

Pilot Report (PIREP)— A report of in-flight weather provided by an aircrew member.

Severe Thunderstorm— A thunderstorm that produces hail greater than or equal to ¾ inch diameter (WF requirement is 1/4") and/or surface wind greater than or equal to 50 knots.

Severe Weather— Any weather condition that poses a hazard to property or life.

SPECI Observation— An unscheduled observation taken when significant changes in weather elements meet special criteria. All SPECIs shall be made as soon as possible after the relevant criteria are observed.

Terminal Aerodrome Forecast (TAF) —A weather forecast prepared by the 25th Operational Weather Squadron (OWS) composed of required weather elements for Creech AFB airfield and covers a 30-hour period. Forecast elements in the body of the forecast text refer to the area within 5 SM of the center of the aerodrome complex. Operationally significant elements outside this area are included in remarks (e.g., TS OMTNS or VCTS). The term VC (vicinity) refers to the area between 5 SM and 10 SM of the aerodrome complex.

Valid Time (VT)—The time in which a weather watch, warning, or advisory is in effect. The start time of the VT is when the phenomenon is expected to first occur. The end time of the VT is when the phenomenon is expected to cease and no longer occur.

Weather Flight (WF)— A military weather organization providing direct operational support at the tactical level.

Weather Advisory (WA)— A special notice provided to a supported agency when an established weather condition that could affect its operation is occurring or is expected to occur.

Weather Warning (WW)— A special notice provided to a supported agency when an established weather condition of such intensity as to affect operations, pose a hazard to life or property, and requires protective action, is occurring or is expected to occur.

Weather Watch— A special notice provided to supported customers that alerts them of a potential for weather conditions of such intensity as to pose a hazard to life or property for which the customer must take protective action.

Attachment 2

SPECIAL OBSERVATION CRITERIA

A2.1. Prevailing Visibility. Prevailing visibility is observed to decrease to less than or, if below, increase to equal or exceed:

A2.1.1. 5 miles

A2.1.2. 4 miles

A2.1.3. 3 miles

A2.1.4. 2 miles

A2.2.5. ½ mile

A2.2. Ceiling. The ceiling is observed to form below, decrease to less than or, if below, increase to equal or exceed:

A2.2.1. 4,000 feet

A2.2.2. 3,000 feet

A2.2.3. 2,000 feet

A2.2.4. 1,500 feet

A2.2.5. 1,000 feet

A2.2.6. 700 feet

A2.2.7. 500 feet

A2.2.8. 200 feet

A2.3. Sky Condition. A layer of clouds or obscuring phenomena aloft is observed below 1,500 feet and no layer aloft was reported below 1,500 feet in the previous METAR or SPECI observation.

A2.4. Wind Shift. The wind direction changes by 45 degrees or more in less than 15 minutes with sustained winds of 10 knots or more throughout the wind shift.

A2.5. Squall. A strong wind characterized by a sudden onset in which the wind speed increases at least 16 knots and is sustained at 22 knots for at least one minute. A SPECI is not required to report a squall if one is currently in progress.

A2.6. Volcanic Eruption. Eruption or volcanic ash cloud first noted.

A2.7. Thunderstorm.

A2.7.1. Begins (A SPECI is not required to report the beginning of a new thunderstorm if one is currently being reported)

A2.7.2. Ends (15 minutes after last occurrence of thunder)

A2.8. Precipitation.

A2.8.1. Hail begins or ends.

A2.8.2. Freezing precipitation begins, ends, or changes in intensity.

A2.8.3. Ice pellets begin, end, or change in intensity.

A2.8.4. Any other type of precipitation begins or ends. Note that, except for freezing rain, freezing drizzle, hail, and ice pellets, a SPECI is not required for changes in type or the beginning or ending of one type while another is in progress.

A2.9. Tornado, Funnel Cloud, or Waterspout. Is observed or disappears from sight or ends.

A2.10. Runway Visual Range (RVR).

A2.10.1. FMQ-19 equipped to report range of less than 100 feet. Algorithm reports when prevailing visibility is less than or equal to 1 mile and/or the RVR is 6,000 feet or less. (Note: Creech AFB does not possess RVR reporting capability.)

A2.11. SPECI Upon Resumption of Observing Services. Required within 15 minutes after returning to duty following a break in hourly coverage if a METAR was not filed as scheduled during that 15-minute period.

A2.12. Backup Mode. When taking manual observations or in backup mode, immediately following notification or sighting of an aircraft mishap at or near the observing location unless there has been an intervening observation.

A2.13. Miscellaneous. Any other meteorological situation that, in the weather technician's opinion is critical.

Attachment 3

FMQ-19 BACKUP CRITERIA

A3.1. General. WF personnel will back up the following elements:

A3.1.1. Type of Report (METAR/SPECI)

A3.1.2. Station Identifier (CCCC)

A3.1.3. Date and Time of Report (YYGGggZ)

A3.1.4. Report Modifier (COR)

A3.1.5. Wind (dddff(f)Gfmfm(fm)KT_dndndnVdxdxdx)

A3.1.6. Visibility (VVVVVSM) or (VVVV)

A3.1.7. Runway Visual Range (RDRDR/VRVRVRVRFT) or (RDRDR/VNVNVNVNVVXVX-VXVXFT) Note 1.

A3.1.8. Thunderstorm (TS)

A3.1.9. Rain (-RA, RA, +RA)

A3.1.10. Freezing Rain (-FZRA, FZRA, +FZRA)

A3.1.11. Drizzle (-DZ, DZ, +DZ)

A3.1.12. Freezing Drizzle (-FZDZ, FZDZ, +FZDZ)

A3.1.13. Snow (-SN, SN, +SN)

A3.1.14. Fog (FG)

A3.1.15. Freezing Fog (FZFG)

A3.1.16. Mist (BR)

A3.1.17. Haze (HZ)

A3.1.18. Squall (SQ)

A3.1.19. Sky Condition (NsNsNshshshs or VVhshshs or CLR)

A3.1.20. Temperature and Dew Point (T'T'/T'dT'd) 62

A3.1.21. Altimeter (APHPHPHPH)

A3.2. Backup Remarks. Weather technicians will provide remarks for the following while in back-up mode:

A3.2.1. Augmented Unit Indicator **(AO2A)**

A3.2.2. Peak Wind **(PK_WND_dddff(f)/(hh)mm)**

A3.2.3. Wind Shift **(WSHFT_(hh)mm)**

A3.2.4. Variable Prevailing Visibility **(VIS_vnvnvnvnvnVvxvxvxvxvx)**

A3.2.5. Lightning **(LTG[LOC])**

A3.2.6. Beginning/Ending of Thunderstorms **(TSB(hh)mmE(hh)mm)**

A3.2.7. Variable Ceiling Height (**CIG_hnhnhnVhxhxhx**)

A3.2.8. Variable Sky Condition **(NSNSNS(hShShS)_V_NSNSNS) [Plain Language]**

A3.2.9. Pressure Rising/Falling Rapidly **(PRESRR/PRESFR)**

A3.2.10. Sea Level Pressure **(SLPppp)**

A3.2.11. Aircraft Mishap **(ACFT_MSHP_)**

A3.2.12. Estimated Wind and Pressure **(WND DATA ESTMD or ALSTG/SLP ESTMD)**

A3.2.13. 3 and 6 Hour Precipitation Amount **(6RRRR)**

A3.2.14. **RVRNO -** Runway Visual Range information should be reported but is missing or not available.

A3.2.15. Maintenance Indicator **($)**

A3.2.16. Correction **(COR)**

Attachment 4

TAF SPECIFICATION AND AMENDMENT CRITERIA

A4.1. Elements. The elements in the TAF apply to an area within 5 statute miles of the designated center point of Creech AFB and will be specified IAW the guidance in AFMAN 15-129V1 and deviation will be designated in paragraph A4.2. The criteria has been tailored to meet the installation commander's requirements of Creech AFB Instruction 11-250, using AFMAN 15-129V1 Table 3.10.

A4.2. Ceiling and Visibility. Ceiling and/or visibility observed or expected to decrease to less than or if below, increase to equal or exceed:

Figure A4.1. Ceiling and Visibility.

CEILING	VISIBILITY
4,000 feet	4 miles (6,400 meters)
2,000 feet	3 miles (4,800 meters)
1,500 feet	3 miles (4,800 meters)

A4.3. Surface Winds.

A4.3.1. The difference between the predominant wind speed and the forecast wind speed is 10 knots and/or difference between the observed gusts is 10 knots from the forecast gust.

A4.3.2. Direction change > 30 degrees when the predominant wind speed or gusts are expected to be $\geq$ 15 knots.

A4.4. Icing (from surface to 10,000 feet AGL). The beginning or ending of icing, not associated with thunderstorms, first meets, exceeds, or decreases below moderate or greater thresholds and was not specified in the forecast.

A4.5. Turbulence (from surface to 10,000 feet AGL). The beginning or ending of turbulence, not associated with thunderstorms, first meets, exceeds, or decreases below moderate or greater thresholds and was not specified in the forecast. This criterion is specified for turbulence category II aircraft.

A4.6. Warning/Advisories. Forecast weather warning criteria and/or TAF amendable weather advisory criteria, including non-convective low-level wind shear occur, or are expected to occur, but were not specified in the forecast or were specified, but are no longer occurring or expected to occur.

A4.7. Thunderstorms have an incorrect forecast start or end time.

A4.8. Altimeter Setting. Altimeter setting meets or exceeds, or if above, drops below 31.00 INS or 28.00 INS and was not specified during the forecast period.

A4.9. TAF Amendment Conditions. The forecast will be amended anytime the following conditions occur:

A4.9.1. An un-forecasted change occurs or is expected to occur, is expected to last at least 30 minutes, and is not forecast by the next whole hour from the time of occurrence.

A4.9.2. A forecasted condition does not occur by the specified hour and is not expected to occur within the next 30 minutes.

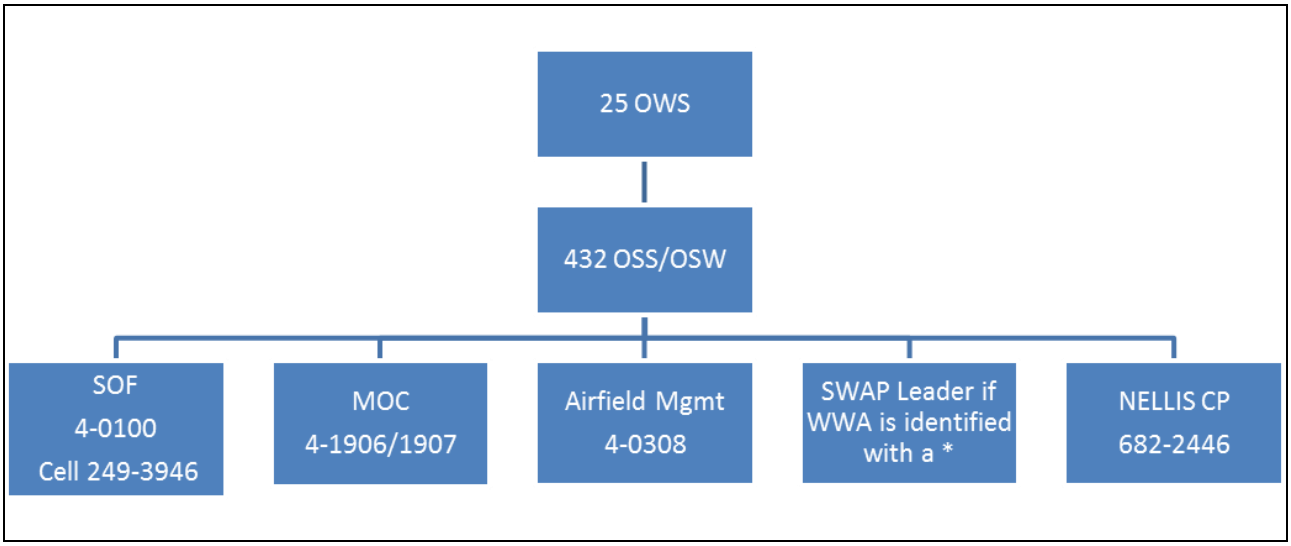
A4.9.3. A temporary (TEMPO) group becomes predominant or is not expected to occur.

A4.9.4. In the interest of safety, efficiency of aircraft operations, flight planning, operational control, or in-flight assistance to aircraft to ensure the forecast is representative of actual or forecast conditions.

Attachment 5

FORECASTED WEATHER WATCH/WARNING NOTIFICATION DIAGRAM

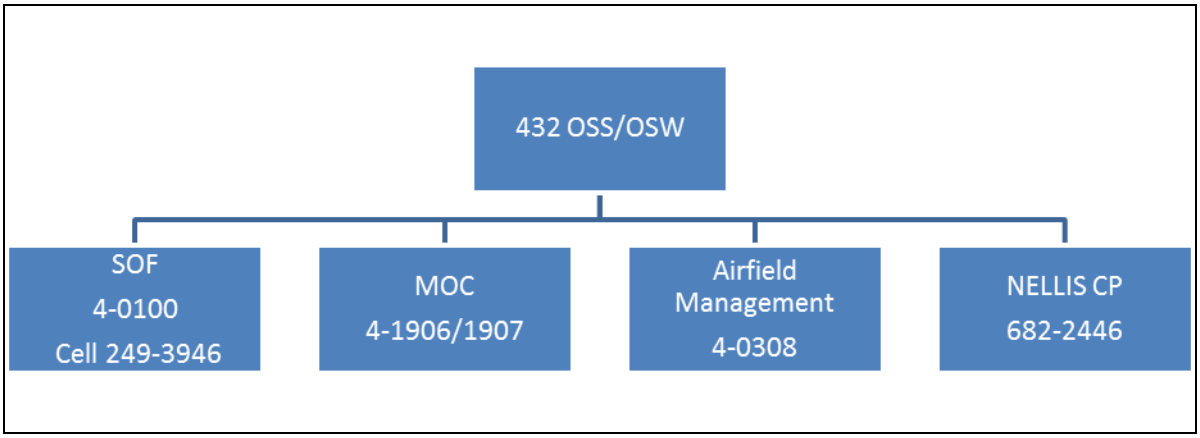
Figure A5.1. NOTIFICATION DIAGRAM



Attachment 6

OBSERVED WEATHER WARNING/ADVISORIES NOTIFICATION DIAGRAM

Figure A6.1. DIAGRAM



Attachment 7

FORMAT FOR WEATHER WARNING, WATCHES, AND WEATHER ADVISORIES

Figure A7.1. TORNADO WATCH:

VALID 04/1713Z (04/1013L) TO 04/1800Z (04/1100L)

THE POTENTIAL EXISTS FOR TORNADOES AT CREECH AFB. A WARNING WILL BE ISSUED IF REQUIRED.

THIS IS NOT A WARNING… THIS WEATHER WATCH INDICATES A POTENTIAL FOR TORNADOES TO EXIST AND SHOULD BE USED TO MAKE FORCE PROTECTION AND RISK MANAGEMENT DECISIONS/PREPARATIONS SHOULD A WARNING BE ISSUED.

Figure A7.2. SEVERE THUNDERSTORM WATCH:

VALID 04/1713Z (04/1013L) TO 04/1900Z (04/1200L)

THE POTENTIAL EXISTS FOR SURFACE WINDS GREATER THAN OR EQUAL TO 50 KNOTS AND/OR HAIL GREATER THAN OR EQUAL TO ¼ INCHES AT CREECH AFB. A WARNING WILL BE ISSUED IF REQUIRED.

THIS IS NOT A WARNING… THIS WEATHER WATCH INDICATES A POTENTIAL FOR WINDS GREATER THAN OR EQUAL TO 50 KNOTS AND/OR HAIL GREATER THAN OR EQUAL TO ¼ INCHES TO EXIST AND SHOULD BE USED TO MAKE FORCE PROTECTION AND RISK MANAGEMENT DECISIONS/PREPARATIONS SHOULD A WARNING BE ISSUED.

Figure A7.3. DAMAGING WINDS ≥ 50 KNOTS WATCH:

VALID 04/1713Z (04/1013L) TO 04/1900Z (04/1200L)

THE POTENTIAL EXISTS FOR SURFACE WINDS GREATER THAN OR EQUAL TO 50 KNOTS AT CREECH AFB. A WARNING WILL BE ISSUED IF REQUIRED.

THIS IS NOT A WARNING… THIS WEATHER WATCH INDICATES A POTENTIAL FOR WINDS GREATER THAN OR EQUAL TO 50 KNOTS TO EXIST AND SHOULD BE USED TO MAKE FORCE PROTECTION AND RISK MANAGEMENT DECISIONS/PREPARATIONS SHOULD A WARNING BE ISSUED.

Figure A7.4. FREEZING PRECIPITATION WATCH:

VALID 04/1100Z (04/0400L) TO 05/0100Z (04/1800L)

THE POTENTIAL FOR FREEZING PRECIPITATION EXISTS FOR CREECH AFB. A WARNING WILL BE ISSUED IF REQUIRED.

THIS IS NOT A WARNING… THIS WEATHER WATCH INDICATES A POTENTIAL FOR FREEZING PRECIPITATION TO EXIST AND SHOULD BE USED TO MAKE FORCE PROTECTION AND RISK MANAGEMENT DECISIONS/PREPARATIONS SHOULD A WARNING BE ISSUED.

Figure A7.5. LIGHTNING WATCH:

VALID 04/1713Z (04/1013L) TO 05/0500Z (04/2200L)

THE POTENTIAL EXISTS FOR LIGHTNING WITHIN 5NM OF CREECH AFB. A WARNING WILL BE ISSUED IF REQUIRED.

THIS IS NOT A WARNING… THIS WEATHER WATCH INDICATES A POTENTIAL FOR LIGHTNING WITHIN 5NM TO EXIST AND SHOULD BE USED TO MAKE FORCE PROTECTION AND RISK MANAGEMENT DECISIONS/PREPARATIONS SHOULD A WARNING BE ISSUED.

Figure A7.6. TORNADO WARNING:

VALID 04/1715Z (04/1015L) TO 04/1745Z (04/1045L)
A TORNADO IS IMMINENT OR OCCURING AT CREECH AFB. TAKE IMMEDIATE SHELTER!!!

Figure A7.7. SEVERE THUNDERSTORM WARNING:

VALID 04/1715Z (04/1015L) TO 04/2315Z (04/1615L)

EXPECT SURFACE WINDS AT SPEEDS OF GREATER THAN OR EQUAL TO 50 KNOTS AND/OR HAIL GREATER THAN OR EQUAL TO ¼ INCHES AT CREECH AFB. PEAK GUSTS ARE EXPECTED TO BE XX KNOTS.

THIS IS A WEATHER WARNING… THE ABOVE CONDITIONS ARE OCCURRING OR ARE EXPECTED TO OCCUR. TAKE IMMEDIATE ACTIONS…. WEATHER WARNINGS ARE TO PROVIDE INFORMATION OUTLINING ENVIRONMENTAL THREATS AND ARE TO BE USED TO TAKE FORCE PROTECTION ACTIONS.

Figure A7.8. DAMAGING WINDS ≥ 50 KNOTS WARNING:

VALID 04/1715Z (04/1015L) TO 04/2315Z (04/1615L)

EXPECT SURFACE WINDS AT SPEEDS OF GREATER THAN OR EQUAL TO 50 KNOTS AT CREECH AFB. PEAK GUSTS ARE EXPECTED TO BE XX KNOTS.

THIS IS A WEATHER WARNING… THE ABOVE CONDITIONS ARE OCCURRING OR ARE EXPECTED TO OCCUR. TAKE IMMEDIATE ACTIONS…. WEATHER WARNINGS ARE TO PROVIDE INFORMATION OUTLINING ENVIRONMENTAL THREATS AND ARE TO BE USED TO TAKE FORCE PROTECTION ACTIONS.

Figure A7.9. STRONG WIND ≥ 35 KNOTS BUT < 50 KNOTS WARNING

VALID 04/1415Z (04/0715L) TO 04/1715Z (04/1015L)

EXPECT SURFACE WINDS AT SPEEDS OF 35 TO 49 KNOTS AT CREECH AFB. PEAK GUSTS ARE EXPECTED TO BE XX KNOTS.

THIS IS A WEATHER WARNING… THE ABOVE CONDITIONS ARE OCCURRING OR ARE EXPECTED TO OCCUR. TAKE IMMEDIATE ACTIONS…. WEATHER WARNINGS ARE TO PROVIDE INFORMATION OUTLINING ENVIRONMENTAL THREATS AND ARE TO BE USED TO TAKE FORCE PROTECTION ACTIONS.

Figure A7.10. FREEZING PRECIPITATION WARNING:

VALID 05/0300Z (04/2000L) TO 05/0500Z (04/2200L)

FREEZING PRECIPITATION IS OCCURRING OR EXPECTED TO OCCUR AT CREECH AFB.

THIS IS A WEATHER WARNING… THE ABOVE CONDITIONS ARE OCCURRING OR ARE EXPECTED TO OCCUR. TAKE IMMEDIATE ACTIONS…. WEATHER WARNINGS ARE TO PROVIDE INFORMATION OUTLINING ENVIRONMENTAL THREATS AND ARE TO BE USED TO TAKE FORCE PROTECTION ACTIONS.

Figure A7.11. HEAVY SNOW WARNING:

VALID 03/1715Z (04/1015L) TO 05/0000Z (04/1700L)

SNOW GREATER THAN 2 INCHES ARE EXPECTED TO OCCUR. TAKE IMMEDIATE ACTIONS…. WEATHER WARNINGS ARE TO PROVIDE INFORMATION OUTLINING ENVIRONMENTAL THREATS AND ARE TO BE USED TO TAKE FORCE PROTECTION ACTIONS.

Figure A7.12. HEAVY RAIN WARNING:

VALID 04/1915Z (04/1215L) TO 05/0100Z (04/1815L)

RAIN GREATER THAN 2 INCHES IN 4 HOURS IS OCCURRING OR EXPECTED TO OCCUR AT CREECH AFB. MAX PRECIPITATION EXPECTED IS X INCHES.

THIS IS A WEATHER WARNING… THE ABOVE CONDITIONS ARE OCCURRING OR ARE EXPECTED TO OCCUR. TAKE IMMEDIATE ACTIONS…. WEATHER WARNINGS ARE TO PROVIDE INFORMATION OUTLINING ENVIRONMENTAL THREATS AND ARE TO BE USED TO TAKE FORCE PROTECTION ACTIONS.

Figure A7.13. OBSERVED LIGHTNING WARNING:

VALID 04/1715Z (04/1015L) TO UFN (UFN)

LIGHTNING HAS BEEN OBSERVED WITHIN 5NM OF CREECH AFB. WEATHER WATCH #XX-XXX IS STILL IN EFFECT.

THIS IS A WEATHER WARNING… THE ABOVE CONDITIONS ARE OCCURRING OR ARE EXPECTED TO OCCUR. TAKE IMMEDIATE ACTIONS…. WEATHER WARNINGS ARE TO PROVIDE INFORMATION OUTLINING ENVIRONMENTAL THREATS AND ARE TO BE USED TO TAKE FORCE PROTECTION ACTIONS.

Figure A7.14. OBSERVED TERMINAL WEATHER ADVISORY FOR SURFACE WINDS:

VALID 04/1709Z (04/1009L) TO UFN (UFN)

SURFACE WINDS GREATER THAN 25 KNOTS BUT LESS THAN 35 KNOTS ARE OCCURING AT CREECH AFB. PEAK GUSTS ARE EXPECTED TO BE XX KNOTS.

Figure A7.15. OBSERVED TERMINAL WEATHER ADVISORY FOR CROSSWINDS:

VALID 04/1709Z (04/1009L) TO UFN (UFN)

SURFACE CROSSWINDS (FOR RUNWAY 08/26) OF GREATER THAN 15 KNOTS ARE OCCURING AT CREECH AFB.

Figure A7.16. OBSERVED TERMINAL WEATHER ADVISORY FOR TURBULENCE:

VALID 04/1709Z (04/1009L) TO UFN (UFN)

MODERATE OR GREATER TURBULENCE (NOT ASSOCIATED WITH THUNDERSTORMS) IS OCCURING (SURFACE-10,000 FEET MSL) WITHIN 100NM OF CREECH AFB.

Figure A7.17. OBSERVED TERMINAL WEATHER ADVISORY FOR ICING:

VALID 04/1709Z (04/1009L) TO UFN (UFN)ICING (NOT ASSOCIATED WITH THUNDERSTORMS) IS OCCURING (SURFACE-10,000 FEET MSL) WITHIN 100NM OF CREECH AFB.

Figure A7.18. OBSERVED LOW LEVEL WIND SHEAR

VALID 04/1709Z (04/1009L) TO UFN (UFN)

LOW-LEVEL WIND SHEAR IS OBSERVED AT CREECH AFB

Figure A7.19. OBSERVED TERMINAL WEATHER ADVISORY FOR SURFACE TEMPERATURES

≤ 40 DEGREES FARENHEIT:

VALID 04/1709Z (04/1009L) TO UFN (UFN)

SURFACE TEMPERATURES ARE OBSERVED TO BE LESS THAN OR EQUAL TO 40F AT CREECH AFB.

Figure A7.20. OBSERVED TERMINAL WEATHER ADVISORY FOR LIGHTNING WITHIN 25NM:

VALID 04/1709Z (04/1009L) TO UFN (UFN)

LIGHTNING IS OCCURING GREATER THAN 5NM BUT LESS THAN 25NM OF CREECH AFB. IF POTENTIAL EXISTS FOR LIGHTNING WITHIN 5NM OF CREECH AFB A WEATHER WATCH WILL BE ISSUED.

Figure A7.21. OBSERVED TERMINAL WEATHER ADVISORY FOR LIGHTNING WITHIN 10NM:

VALID 04/1709Z (04/1009L) TO UFN (UFN)

LIGHTNING IS OCCURING GREATER THAN 5NM BUT LESS THAN 10NM OF CREECH AFB. IF POTENTIAL EXISTS FOR LIGHTNING WITHIN 5NM OF CREECH AFB A WEATHER WATCH WILL BE ISSUED.

Attachment 8

JUSTIFICATION FOR WEATHER WATCHES, WARNINGS, AND ADVISORIES FOR CREECH AFB

Table A8.1. Justification for WWAs for Creech AFB.

#	Criteria	Effect	Who Makes Decision/When	Notification
1	Tornado	Flight line operations and flying ceases; Base personnel seek shelter	1. 432 OG/CC in coordination with SOF & Operations Supervisors (11 RS/30RS/556 TES) 2. Maintenance Supervisor 3. Upon receipt of warning	WF or Nellis Command Post via telephone or LAN
2	Surface winds ≥ 50 knots	Damage to wings and airframe unless RPA is moved to a hangar Flying ceases	1. 432 OG/CC in coordination with SOF & Operations Supervisors (11 RS/30 RS/556 TES) 2. Maintenance Supervisor 3. Upon receipt of warning	WF or Nellis Command Post via telephone or LAN
3	Strong Wind ≥ 35 < 50 kts	Flying ceases; takeoff and landing prohibited	1. 432 OG/CC in coordination with SOF & Operations Supervisors (11 RS/30 RS/556 TES) 2. Maintenance Supervisor 3. Upon receipt of warning	WF or Nellis Command Post via telephone or LAN

4	Freezing Precipitation	Flying ceases	1. 432 OG/CC in coordination with SOF & Operations Supervisors (11 RS/30 RS/556 TES) 2. Maintenance Supervisor 3. Upon receipt of warning	WF or Nellis Command Post via telephone or LAN
5	Heavy Snow accumulation (≥ 2 inches in 12 hours)	Flying ceases	1. 432 OG/CC in coordination with SOF & Operations Supervisors (11 RS/30 RS/556 TES) 2. Maintenance Supervisor 3. Upon receipt of warning	WF or Nellis Command Post via telephone or LAN
6	Heavy Rain (≥ 2 inches in 12 hours)	Flying may cease	1. 432 OG/CC in coordination with SOF & Operations Supervisors (11 RS/30 RS/556 TES) 2. Maintenance Supervisor 3. Upon receipt of warning	WF or Nellis Command Post via telephone or LAN
7	Lightning w/in 5 nm of Creech AFB	Takeoff and landing prohibited; hangar aircraft; MX ceases	1. 432 OG/CC in coordination with SOF & Operations Supervisors (11 RS/30 RS/556 TES) 2. Maintenance Supervisor 3. Upon receipt of warning	WF or Nellis Command Post via telephone or LAN

8	Surface Winds >25 knots but <35 knots	Ground operations and RPA pattern operations cease. OG/CC may elect to continue flight operations and overfly the high wind period	1. 432 OG/CC in coordination with SOF & Operations Supervisors (11 RS/30 RS/556 TES) 2. Maintenance Supervisor 3. Upon receipt of warning	WF or Nellis Command Post via telephone or LAN
9	Crosswinds > 15 knots	Ground operations and RPA pattern operations cease. OG/CC may elect to continue flight operations and overfly the high wind period	1. 432 OG/CC in coordination with SOF & Operations Supervisors (11 RS/30 RS/556 TES) 2. Maintenance Supervisor 3. Upon receipt of warning	WF or Nellis Command Post via telephone or LAN
10	Moderate or greater turbulence within 100 nm (surface – 10,000 ft MSL) not associated with thunderstorms	If moderate is forecasted – flying continues; if moderate is observed – flying ceases. Flying in turbulence greater than moderate is prohibited	1. 432 OG/CC in coordination with SOF & Operations Supervisors (11 RS/30 RS/556 TES) 2. Upon receipt of warning	WF or Nellis Command Post via telephone or LAN
11	Any intensity icing within 100 nm (surface – 10,000ft MSL) not associated with thunderstorms	If forecasted – flying continues; if observed – flying ceases.	1. 432 OG/CC in coordination with SOF & Operations Supervisors (11 RS/30 RS/556 TES) 2. Upon receipt of warning	WF or Nellis Command Post via telephone or LAN

12	Low Level Wind Shear	Takeoff and landing may be prohibited	1. 432 OG/CC in coordination with SOF & Operations Supervisors (11 RS/30 RS/556 TES) 2. Upon receipt of warning	WF or Nellis Command Post via telephone or LAN
13	Surface temperature less than or equal to 40°F	Maintenance takes preventative measures to prevent frost occurring	1. 432 OG/CC in coordination with SOF & Operations Supervisors (11 RS/30 RS/556 TES) 2. Maintenance Supervisor 3. Upon receipt of warning	WF or Nellis Command Post via telephone or LAN
14	Lightning within 25 nm of Creech AFB	Flying may cease	1. 432 OG/CC in coordination with SOF & Operations Supervisors (11 RS/30 RS/556 TES) 2. Maintenance Supervisor 3. Upon receipt of warning	WF or Nellis Command Post via telephone or LAN
15	Lightning within 10 nm of Creech AFB	Flying may cease; MX takes precautionary measures	1. 432 OG/CC in coordination with SOF & Operations Supervisors (11 RS/30 RS/556 TES) 2. Maintenance Supervisor 3. Upon receipt of warning	WF or Nellis Command Post via telephone or LAN

Attachment 9

WEATHER IMPACTS ON UNIT OPERATIONS

Table A9.1. MQ-1 Weather Impacts

Mission-Specific Weather Limitations for RPA Operations. The following tables provide a summary of Weather, Altitude and Event Minimums for MQ-1/MQ-9 aircraft. Yellow identifies a mission that could have marginal conditions. Red symbolizes unfavorable conditions (NO-GO) for the mission.

LAUNCH AND RECOVER IMPACTS	
CEILINGS ≥2000FT to < 4000FT AGL	**CEILING < 2000FT**
VISIBILITY ≥ 4SM to < 5SM	**VISIBILITY < 4SM**
CROSSWINDS 10-16KTS	**CROSSWINDS >16KTS**
WIND SHEAR CONDITIONS FORECASTED OR OBSERVED	**N/A**
GUST SPREAD 15-20KTS	**SURFACE WINDS > 30KTS/** **GUST SPREAD >20KTS/TAILWIND >5KTS**
LIGHT PRECIP (INCLUDING SNOW), VCTS OR FORECASTED THUNDERSTORMS	**MODERATE OR GREATER PRECIP,** **OBSERVED TS ON STATION / ANY FREEZING PRECIP**
TEMPERATURE < 04°C (40°F)	**ICE, FROST, OR SNOW ON SURFACE AND/OR RCR <12**
(ICE RETARDANT MAY NEED APPLIED)	
WIND CHILL -10 °F TO -20°F	**≥ 35°C (95°F); WIND CHILL < -20°F**
LAUNCH AND RECOVER AND ORBIT/ROUTE IMPACTS	
MODERATE TURBULENCE	**> MODERATE TURBULENCE**
FORECAST LIGHT ICING	**FORECAST > LIGHT ICING**
ORBIT/ROUTE IMPACTS	
ISOLATED PRECIP & TS	**≥ FEW PRECIP & TS**
CAN BE AVOIDED (1-24%)	**CANNOT BE AVOIDED (≥ 25%)/ ANY FREEZING PRECIP**
BKN CLOUDS (CAN BE AVOIDED)	**BROKEN (CANNOT BE AVOIDED) OR OVERCAST**

PPSL WX LIMITATIONS	
DENSE CLOUDS / ≥ MODERATE PRECIP/LIGHT FREEZING/FROZEN PRECIP	HEAVY PRECIP/ ≥ MODERATE FREEZING/FROZEN PRECIP
≥ 35KTS BUT < 39KTS SUSTAINED	≥ 39KTS SUSTAINED AND/OR ≥ 52KTS

Table A9.2. MQ-9 Weather Impacts

LAUNCH AND RECOVER IMPACTS	
CEILINGS ≥2000FT to < 4000FT AGL	**CEILING < 2000FT**
VISIBILITY ≥ 4SM to < 5SM	**VISIBILITY < 4SM**
CROSSWINDS 10-15KTS or	**>15KTS or**
10-13KTS for asymmetric load	**>13KTS for asymmetric load**
WIND SHEAR CONDITIONS FORECASTED OR OBSERVED	**N/A**
GUST SPREAD 15-20KTS	**SURFACE WINDS > 30KTS/**
	GUST SPREAD >20KTS/TAILWIND >10KTS
LIGHT PRECIP (INCLUDING SNOW), VCTS OR FORECASTED THUNDERSTORMS	**MODERATE OR GREATER PRECIP,**
	OBSERVED TS ON STATION / ANY FREEZING PRECIP
TEMPERATURE < 04°C (40°F)	**ICE, FROST, OR SNOW ON SURFACE AND/OR RCR <12**
(ICE RETARDANT MAY NEED APPLIED)	
WIND CHILL -10 °F TO -20°F	**≥ 35°C (95°F); WIND CHILL < -20°F**
LAUNCH AND RECOVER AND ORBIT/ROUTE IMPACTS	
MODERATE TURBULENCE	**> MODERATE TURBULENCE**
FORECAST LIGHT ICING	**FORECAST > LIGHT ICING**
ORBIT/ROUTE IMPACTS	
ISOLATED PRECIP & TS	**≥ FEW PRECIP & TS**
CAN BE AVOIDED (1-24%)	**CANNOT BE AVOIDED (≥ 25%)/ ANY FREEZING PRECIP**
BKN CLOUDS (CAN BE AVOIDED)	**BROKEN (CANNOT BE AVOIDED) OR OVERCAST**
PPSL WX LIMITATIONS	
DENSE CLOUDS / ≥ MODERATE PRECIP/LIGHT FREEZING/FROZEN PRECIP	**HEAVY PRECIP/ ≥ MODERATE FREEZING/FROZEN PRECIP**

≥ 35KTS BUT < 39KTS SUSTAINED	**≥ 39KTS SUSTAINED AND/OR ≥ 52KTS**

Attachment 10

FORECAST AND OBSERVATION CODE BREAKDOWN

Table A10.1. Forecast Code Breakdown.

KINS	**TAF**	**AMD**	**2715/2821**	**36010G20KT**	**4800 BR**	**SCT005 OVC012**	**510002**
1	2	3	4	5	6	7	8

650208	**QNH3012INS**	**T32/2721Z T12/2812Z**	**BTS**
9	10	11	12

TEMPO 2718/2721 OVC005

13

BECMG 2801/2802 04008KT 9999 OVC025 650208 QNH3020INS

14

WND VRB04KT AFT 05

15

1	Station identifier (ICAO) for Creech Air Force Base.
2	Data type. TAF - Terminal Aerodrome Forecast.
3	Modifier. AMD - Amendment, COR - Correction, RTD - Transmission delayed.
4	Valid Time. TAF - 30-hour valid period DDHH/DDHH.
5	Winds - The first three digits represent the direction from which the wind is blowing to the nearest 10 degrees, followed by the two-digit prevailing wind speed--gusts follow a "G".
6	Visibility, in meters, followed by the weather or obstructions to visibility:

Statute Miles	Meters		Statute Miles	Meters
1/16	0100		1 1/2	2400
1/8	0200		1 5/8	2600
3/16	0300		1 3/4	2800
1/4	0400		1 7/8	3000

5/16	0500		2	3200
3/8	0600		2 1/4	3600
1/2	0800		2 1/2	4000
5/8	1,000		2 3/4	4400
3/4	1,200		3	4800
7/8	1,400		4	6000
1	1,600		5	8000
1 1/8	1,800		6	9000
1 1/4	2,000		7+	9999
1 3/8	2,200			
QUALIFIER		**WEATHER PHENOMENA**		
Intensity or Proximity **1**	**Descriptor** **2**	**Precipitation** **3**	**Obscurations** **4**	**Other** **5**
- Light	MI Shallow	DZ Drizzle	BR Mist (Fog)	PO Well Developed Dust/Sand Whirls
Moderate	PR Partial (covering part of the aerodrome)	RA Rain	FG Fog	SQ Squalls
+ Heavy (well developed in the case of dust/sand whirls, dust devils and tornadoes/waterspouts)	BC Patches DR Drifting DR Low Drifting	SN Snow SG Snow Grains IC Ice Crystals (Diamond Dust)	FU Smoke VA Volcanic Ash DU Widespread Dust	FC Funnel Cloud(s) (Tornado or Waterspout) SS Sand Storm
VC In the Vicinity	BL Blowing	PL Ice Pellets	SA Sand	DS Duststorm

	SH Shower(s) TS Thunderstorm FZ Freezing	GR Hail GS Small Hail and or Snow Pellets	HZ Haze PY Spray	

7	Sky coverage and height AGL in hundreds of feet of the base of the layer.

SKC = Clear	0/8 coverage
FEW = Few	1/8 - 2/8 coverage
SCT = Scattered	3/8 - 4/8 coverage
BKN = Broken	5/8 - 7/8 coverage
OVC = Overcast	8/8 coverage

8	Turbulence intensity and layers.
	5 = Turbulence Indicator
	1 = Intensity (see chart below)
	000 = Height above surface of base of layer in hundreds of feet
	2 = Thickness of layer in thousands of feet

CODE	**TURBULENCE**
1	Light
2	Moderate in clear air, occasionally
3	Moderate in clear air, frequent
4	Moderate in cloud, occasionally
5	Moderate in cloud, frequent
6	Severe in clear air, occasionally
7	Severe in clear air, frequent
8	Severe in cloud, occasionally
9	Severe in cloud, frequent
X	Extreme Turbulence

9	Icing intensity and layers.
	6 = Icing Indicator

<table>
<tr><td></td><td>5 = Intensity (see chart below)
020 = Height above surface of base of layer in hundreds of feet
8 = Thickness of layer in thousands of feet
<table><tr><th>CODE</th><th>ICING</th></tr><tr><td>0</td><td>Trace icing</td></tr><tr><td>1</td><td>Light mixed</td></tr><tr><td>2</td><td>Light rime</td></tr><tr><td>3</td><td>Light clear</td></tr><tr><td>4</td><td>Moderate mixed</td></tr><tr><td>5</td><td>Moderate rime</td></tr><tr><td>6</td><td>Moderate clear</td></tr><tr><td>7</td><td>Severe mixed</td></tr><tr><td>8</td><td>Severe rime</td></tr><tr><td>9</td><td>Severe clear</td></tr></table></td></tr>
<tr><td>10</td><td>Altimeter Setting. The minimum forecast for that time period.</td></tr>
<tr><td>11</td><td>Max/Min temperature followed by the date/time of occurrence (UTC).</td></tr>
<tr><td>12</td><td>The initials of the technician who issued the TAF.</td></tr>
<tr><td>13</td><td>TEMPO = the hours during which conditions may be observed to occur intermittently.</td></tr>
<tr><td>14</td><td>BECMG = a change in predominant conditions where the new conditions should be valid by the end of the BECMG time group.</td></tr>
<tr><td>15</td><td>Remarks are used to elaborate on preceding data.</td></tr>
</table>

Table A10.2. Observation Code Breakdown.

KINS METAR 1655Z 26014G22KT 170V270 1SM R26/1600FT -TSRA BR	
1 2 3 4 5 6 7 8	
FEW005 OVC008	
9	
64/45 ALSTG 29.99 RMK TS OVD MOV E TWR VIS 2 PA+4231 55/BS	
10 11 12 13 14	
1	ICAO station identifier for Creech Air Force Base
2	Observation type; METAR, SPECI, or LOCAL METAR = Regularly scheduled hourly observation transmitted between H+55 and H+59 SPECI = Special Observation - taken to report significant changes in weather elements LOCAL = Local Observation - taken to report changes in conditions significant to local operations which do not meet special criteria
3	Time in ZULU (Z)
4	Wind direction, speed, and gusts reported to the nearest 10 degrees in 2 digits and in knots using 3 digits with gusts following a "G." Prevailing wind direction and speed are averaged every two minutes.
5	Variability of wind direction 60 degrees or more
6	Visibility measured in Statute Miles (SM) from normal point of observation
7	Runway Visual Range (RVR) - instrument determined visibility in hundreds of feet; in this example, RVR for Runway 26 is 1,600 feet.
8	Present weather. In this example, thunderstorm with light rain (-TSRA) and light fog (BR) (see table 3.1 for full present weather identifier)

9	Sky condition with cloud layers measured in eighths of cloud coverage and heights measured in hundreds of feet above ground level (AGL). Examples: FEW005 = Few clouds at 500 feet OVC008 = Overcast skies at 800 feet	
9.1.	Sky coverage contractions.	
	CLR = Clear	0/8 coverage
	FEW = Few	1/8 to 2/8 coverage
	SCT = Scattered	3/8 - 4/8 coverage
	BKN = Broken	5/8 - 7/8 coverage
	OVC = Overcast	8/8 coverage
	VV = Indefinite definite ceiling cannot be determined. Vertical visibility reported as how far can be seen into the clouds.	
10	Temperature and dew point; in degrees Fahrenheit locally and degrees Celsius long line.	
11	Altimeter (ALSTG) setting in inches of mercury.	
12	Remarks (RMK): Remarks to surface observation	
13	Pressure Altitude (PA) in feet.	
14	Time past the hour observation was transmitted and weather technician's initials.	

Attachment 11

RESOURCE PROTECTION NOTIFICATION CHAIN

A11.1. 25 OWS to Creech AFB Notification Chain Due to limited staffing and the time-critical nature of this information, 25 OWS personnel cannot individually notify every agency requiring weather watches, warnings, and advisories; hence, the application of a notification chain that exploits installation command and communications channels. Procedures developed to this end ensure weather personnel do not spend more time communicating than monitoring weather conditions. All units receiving these weather products must be involved in a continuous program of evaluation and improvement of the weather dissemination system, including inter-unit dissemination. Agencies must make certain that weather dissemination procedures ensure those needing information receive it. Individual commanders of units in need of weather information are responsible for having their units listed in the notification chain that follows.

Figure A11.1. Notification Chain

Attachment 12

SEVERE WEATHER ACTION PLAN RESPONSIBILITIES

A12.

Table A12.1. Duty Forecaster.

1	Initiate and maintain an events log as time permits IAW local policy.
2	Notify/recall SWAT Standby Member as necessary
3	Constantly coordinate with 25 OWS on the issuance of Watches/Warnings.
4	Notify appropriate agencies of the issuance of Watches/Warnings.
5	Advise senior base leadership of the situation as requested.
6	Review SWAT Standby Member/Team Chief checklist and begin any duties, as necessary, u until the member arrives.
7	Conduct a concise forecast discussion of the current situation to apprise SWAT Standby Member/Team Chief upon their arrival.
8	Perform Duty Observer functions in the absence of the Duty Observer.
9	Issue observed Warnings/Advisories.
10	Review PIREPs, SIGMETs, and area NWS forecasts products for severe weather reports. If applicable, incorporate into products.
11	Update Mission Forecast Products (MWPs) as needed.
12	Work closely with the SWAT members. Allow them to accomplish tasks which will free duty forecaster to handle critical tasks such as watch/warning/advisory issuance/notification, MWP amendments and coordination with 25 OWS.
13	Provide inputs to post-event OPREP-3 report (if required). Archive data for and perform forecast review.

Table Al2.2. SWAT Standby Member/Team Chief.

1	When first notified report to the station within 60 minutes of notification. Determine if the situation warrants the recall/stand-by placement of additional personnel.
2	Upon arrival, receive initial forecast discussion from Duty Forecaster.
3	Ensure duty positions are delegated and members are performing assigned tasks (combine duty positions when necessary). a. Duty Forecaster b. Duty Observer
4	Ensure the following tasks are accomplished on a recurring basis: a. Recall additional personnel if needed b. Adjusts duties as deemed necessary c. As requested, keep senior base leadership, command post and customers apprised of latest developments d. Keep personnel focused on assigned tasks e. Ensure all applicable watches/warnings/advisory are issued and notification has been accomplished. f. Review all forecast products for accuracy and horizontal consistency (e.g., watches/warnings/advisories, TAFs, and MWPs) g. Provide expertise and guide decision making.
5	Conduct post-event review and discussion to provide team members with feedback.
6	Consolidate inputs and coordinate with 25 OWS for OPREP-3 report (if required).

Table Al2.3. Duty Observer.

1	Begin performing a Modified Basic Weather Watch (MBWW).
2	Continue normal observing duties.
3	Update the Duty Forecaster and Team Chief on latest conditions.
4	Assist other team members as needed.
5	Work closely with the SWAT members.
6	Provide inputs to forecast review and OPREP-3 report as needed.

Attachment 13

LOCATION OF CREECH AFB WEATHER EQUIPMENT

Figure A13.1. Locations